



**ENVIRONMENTAL WATER SYSTEMS™**

*The Leader In Whole Home Water Filtration.*

**Since 1987**

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## PRODUCT AND INSTALLATION MANUAL

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### 5 Stage Reverse Osmosis Systems



Model Numbers:

RU500T35 w/BP  
RU500T35 w/BP w/UV

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**



EWS, Inc./Environmental Water Systems

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Retain this Product & Installation Manual for Maintenance and Information  
Please Register this Product - It is a Requirement for Warranty

## A Special Message to Our Customers,

EWS, Inc. and Environmental Water Systems would like to thank you for your consideration in selecting from our comprehensive list of residential filtration and conditioning product.

We recommend that you take the time to read the information that pertains to your product as you begin to use it.

The information in this manual is designed to assist your installer to set-up, install and start-up your system properly. In addition, the information contained in this manual is designed to provide the consumer, the most comprehensive information on this series of product.

Please contact us if you have any questions, comments or additions to the information provided.

Sincerely,  
Customer Service at EWS, Inc.



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## Installation of the Filtration System - Please Read the Enclosed Information

Please take the time to familiarize yourself with the unit you are about to install. The Table of Contents will point to specific instructions for the simple step-by-step instructions for;

- Installation of a Dispenser/Faucet
- Placement or Locating the Water System
- Inlet Supply Water Connection
- Connection of Tubing from Supply and to Dispenser/Faucet
- System Start-Up and Operation Procedures

### You may need the following for proper installation:

- |                     |               |                                    |                      |
|---------------------|---------------|------------------------------------|----------------------|
| • Teflon tape       | • Work Gloves | • Safety Glasses                   | • Knife or scissors  |
| • Adjustable Wrench | • Pliers      | • Screwdriver; straight & phillips | • Drill & drill bits |

**WARNING:** Verify that all components are included with the unit and were not lost, misplaced, or damaged in shipping or handling. Any damage in shipping needs to be reported to the shipping company.

**WARNING:** Do not attempt to install this system using defective or damaged components. Check and inspect, inlet and outlet fittings and any other connections on this system that might have been damaged during shipping and handling. Check all these components again upon installation and start-up for any hidden issues. All plumbing should be done in accordance with all local plumbing codes. Water Pressure: minimum 40psi, maximum 65psi. Water Temperature Range (cold supply only): not to exceed 95°F or below 40°F. Electrical (if applicable): an uninterrupted a/c supply, (if applicable): make sure voltage supply is compatible with your unit prior to install

**WARRANTY:** Warranty Registration of this product is required to have a warranty. A proper installation and start-up will save you time, money and hassles, and is also required for warranty purposes. Any issue as a result of improper application, set-up, installation and/or start-up will void any warranty.

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## Dispenser/Faucet Q & A - Reverse Osmosis

Spout pulls out from faucet body that's why it swivels. Spout has 2 o-rings at base and is inserted completely into bottom of body to prevent leaking. Handle and tip can also be removed

**Q: I do not want to drill any extra holes or use a separate dispenser/faucet - what can I do?**

**A:** Nothing. Reverse osmosis systems are limited to a separate dispenser.

**WARNING:** These systems manufacture a limited amount of water and therefore the connection to the cold side of your sink faucet is an unavailable option. In addition, the water produced by a reverse osmosis system is aggressive and would have adverse leaching effects on any other metals (ie: brass, copper) other than stainless steel.

**Note:** Drinking water filtration systems are pass through systems and will allow this option. There will be a diminishment in your flow rate to the cold side of the faucet (kitchen faucet has a flow rate of up to 2.3 gallons per minute and the filtered water is delivered up to 1 gallon per minute). To get filtered water you must be sure you have the faucet to the cold side only. This application or option is not applicable for reverse osmosis systems.

**Q: I would like to use another dispenser/faucet?**

**A:** Based on many styles and finishes, a consumer may have another dispenser they would like to use. No problem, all these items have universal or industry standard fittings, or if not, can be easily adapted to fit. Always check with manufacturer for proper specifications.

**Note:** EWS, Inc. includes a standard chrome, long-reach, lead-free faucet with white tip, handle and optional air gap adaptor. Be aware - an air gap may be code and required with a dispenser/ faucet installation.

**Options:** EWS provides the following options to match other items at an additional charge;  
Change your white tip and handle to black  
Change your white air gap adaptor to black  
Change your faucet to the following finishes; white faucet (with white tip, handle and air gap), satin nickel, polished nickel, polished brass, or oil rubbed bronze (all with black tip, handle and air gap). Inquire with your local EWS, Inc. distributor, contact an authorized internet distributor or visit us on the web (see page 4.2-25 for more details).

**Q: Can we connect the filtered water up to other devices?**

**A:** Yes, simply connect by a "T" connection, the filtered water line to any instant hot, chiller, ice-maker, refrigerator, etc. Regarding flow rate, be mindful of too many (3 or more) connections. Also, any length of total tubing in excess of 20 feet combined to tank, faucet, and all items may create issues with delivery rates\*\*. See our Point of Entry, Whole Home Appliances to filter all the fixtures within the home.

**WARNING:** Reverse osmosis may have warranty or restrictions with other devices, consult with other manufacturer's product information.

**Note:** \*\*Tubing in excess of 20 feet is calculated by adding the length of tube from unit to tank (yellow tubing) and the faucet outlet on unit to dispenser or other device (blue tubing). EWS, Inc. supplies 5 feet of each type of tubing.

**Q: Do I need to use the air gap adaptor?**

**A:** Yes, if local code requires that an air gap be used. Since the unit is both connected to a potable water supply and a drain, some code requires an air gap to prevent cross-contamination, similar to all EWS point of entry systems, a dishwasher and/or washer machines. Care has to be taken with this unit to make all the proper connections. Follow all local plumbing codes.

## Placement or Locating Dispenser/Faucet - Reverse Osmosis

Step by step instructions to mount and secure the supplied dispenser/faucet  
**Professional Installation is Strongly Recommended**

### Step 1: Locate Faucet Parts Bag

<b><u>Parts Included:</u></b>	faucet body with handle, faucet spout with tip, decorative washer, black rubber washer, white beveled washer, lock washer, hex nut, 1/4" tube insert sleeve, 1/4" plastic compression ferrule, 1/4" compression nut
<b><u>Included</u></b>	flat white washer (for use under decorative washer depending on hole/application)
<b><u>Optional Parts:</u></b>	air gap adaptor (white) for use with RO air gap applications

### Preferred - Select a standard sink location to mount the faucet.

It is recommended that the faucet be placed in a hole provided on most sinks similar to the ones used for a sprayer, soap dispenser and/or dishwasher air gap. If the hole or space is unavailable, an alternative location will be required:

NON-AIR GAP:	MINIMUM HOLE REQUIRED 1/2",	MAXIMUM 1 3/8"
AIR GAP:	MINIMUM HOLE REQUIRED 1 1/4",	MAXIMUM 1 3/8"

**Option A:** On the sink. This option is to drill a new hole into the sink rim itself, if space allows.

**Option B:** On the countertop next to a sink. This option is to position the faucet spout in the correct location to drain into the sink. This requires a clearance around the faucet both above and below the countertop. Use the supplied dispenser as a template or see the enclosed dispenser schematic and dispenser dimensions.

### Prepare to drill the hole using the dispenser as a template.

- Sinks can be made of, but not limited to, stainless steel, copper, porcelain/steel, enamel/cast iron, man-made surfaces, stone, concrete, and/or materials known or unknown at this time.
- Countertops can be made of, but not limited to, or be a combination of, natural stone, enamel, porcelain, concrete, wood, metals and/or man-made materials known or unknown at this time.

**CAUTION:** Please consult with the sink or countertop manufacture, supplier, fabricator, or installer for proper drilling techniques and methods.

EXTREME CARE MUST BE TAKEN IN DRILLING THE HOLE FOR ANY SURFACE. THE SURFACE MATERIALS OF SINKS AND COUNTERTOPS CAN CHIP OR CRACK. THE MANUFACTURER ASSUMES NO RESPONSIBILITY FOR ANY DAMAGE RESULTING FROM THIS INSTALLATION.

**WARNING:** USE SAFETY GLASSES OR OTHER EYE PROTECTION WHEN GRINDING OR DRILLING TO PREVENT POSSIBLE EYE INJURY DUE TO FLYING PARTICLES.

**Follow Steps 2 through 12**  
**Installation of the Supplied Dispenser/Faucet**



## Installation of the Supplied Dispenser/Faucet with Air Gap

Step by step instructions to mount and secure the supplied dispenser/faucet  
If using another faucet, please review the instructions included with that product\*\*

**\*\*\*Other Air Gap connections can be found with  
Drain Installation and Connection and System Interconnection instructions**

### Above the Surface

#### Step 2:

Place air gap to bottom of faucet body\*\*\*  
(optional: place flat white washer under decorative washer)

#### Step 3:

Place black rubber washer below air gap  
(or below optional flat white washer)

#### Step 4:

Place faucet stem through hole and center

### Below the Surface

#### Step 5:

Insert white beveled washer, bevel side up to  
fit snugly into a (1 3/8") pre-drilled hole or flat side  
up depending on the application

#### Step 6:

Place lock washer on this white beveled washer

#### Step 7:

Spin hex nut onto faucet stem and  
tighten hex nut and washers into place

#### Step 8:

Slide 1/4" compression nut (threads up)  
onto 1/4" filtered line

#### Step 9:

Slide 1/4" plastic compression ferrule, long side  
down onto filtered water tube. Ferrule will seat into  
compression nut

#### Step 10:

Insert 1/4" tube insert sleeve into 1/4" filtered water line

#### Step 11:

Insert 1/4" blue (filtered water) tube into faucet stem. Leave  
other end available for system interconnection

#### Step 12:

Thread 1/4" compression nut onto faucet stem and tighten

**CAUTION: Do not overtighten fittings**

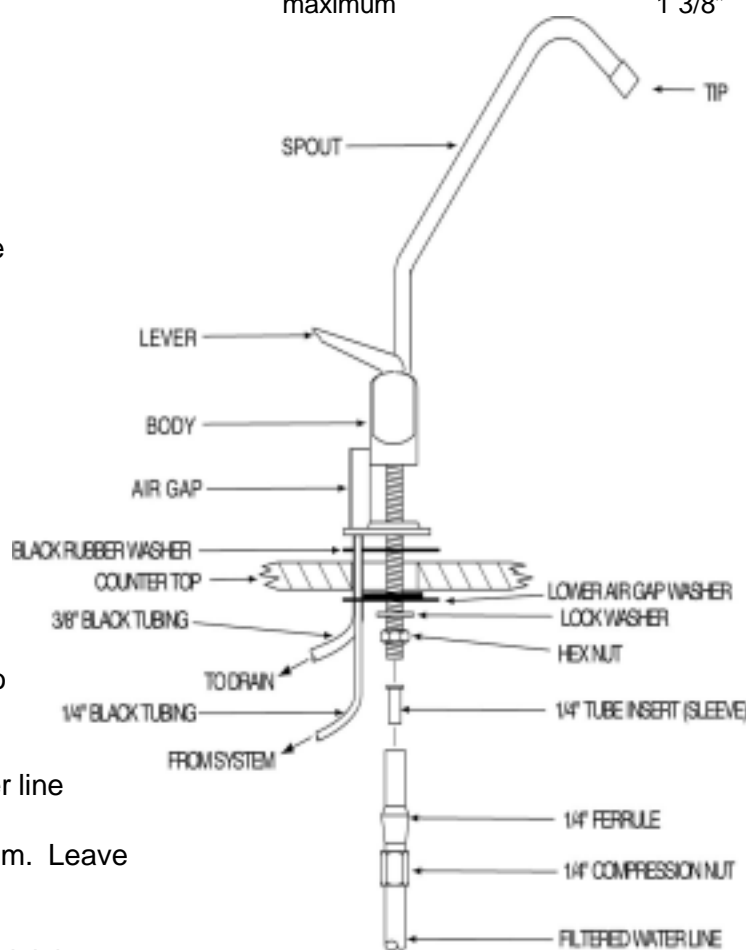
**Note:** Spout pulls out from faucet body and has 2 o-rings at base. Insert completely into bottom of faucet body to prevent leaking. Spout swivels to direct water. Handle and tip can be removed. Handle can be locked up in open position.

\*\* Other faucets check with specifications.

\*\*\*All dimensions are approximate.

### Enclosed Dispenser/Faucet Dimensions\*\*\*

Height: from deck to top of dispenser	8"
from deck to tip of dispenser	6 1/4"
Reach: from center of dispenser to tip	6"
Hole: minimum required with air gap	1 1/4"
maximum	1 3/8"



**Go to the Inlet Supply Water Connection**



## Installation of the Supplied Dispenser/Faucet without Air Gap

Step by step instructions to mount and secure the supplied dispenser/faucet  
If using another faucet, please review the instructions included with that product\*\*

### Above the Surface

#### Step 2:

Place decorative washer to bottom of faucet body  
(optional: place flat white washer under decorative washer)

#### Step 3:

Place black rubber washer below decorative washer  
(or below optional flat white washer)

#### Step 4:

Place faucet stem through hole and center

### Below the Surface

#### Step 5:

Insert white beveled washer, bevel side up to fit snugly into a (1 3/8") pre-drilled hole or flat side up depending on the application

#### Step 6:

Place lock washer on this white beveled washer

#### Step 7:

Spin hex nut onto faucet stem and tighten hex nut and washers into place

#### Step 8:

Slide 1/4" compression nut (threads up) onto 1/4" filtered line

#### Step 9:

Slide 1/4" plastic compression ferrule, long side down onto filtered water tube. Ferrule will seat into compression nut

#### Step 10:

Insert 1/4" tube insert sleeve into 1/4" filtered water line

#### Step 11:

Insert 1/4" blue (filtered water) tube into faucet stem. Leave other end available for system interconnection

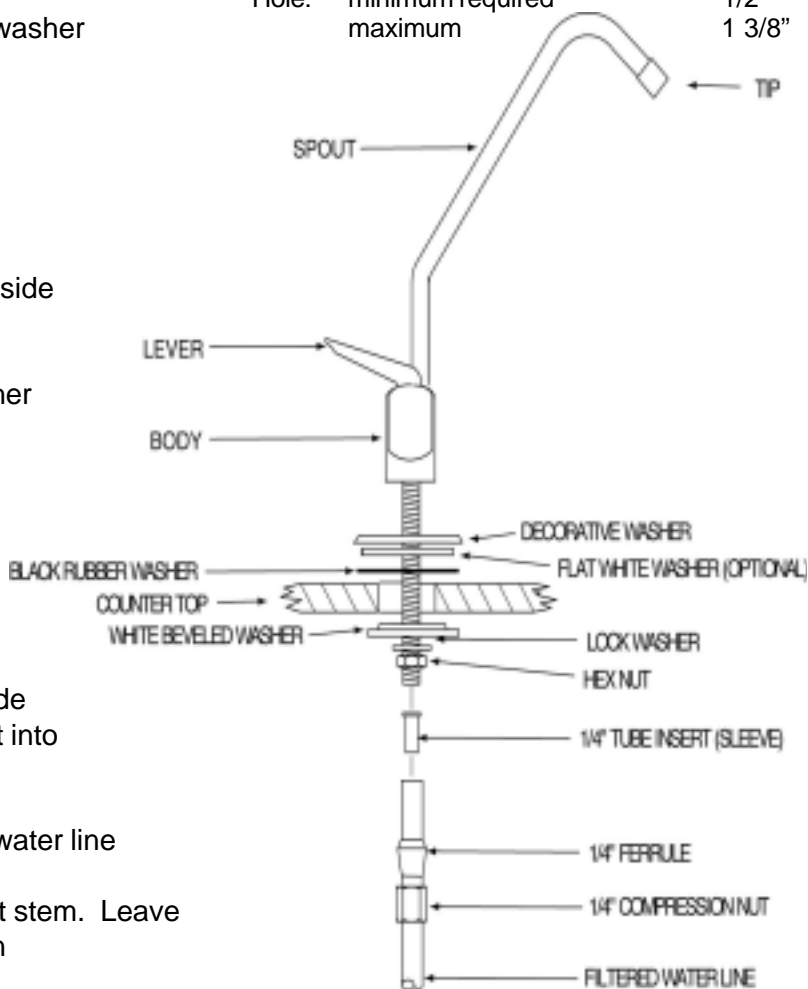
#### Step 12:

Thread 1/4" compression nut onto faucet stem and tighten

**CAUTION: Do not overtighten fittings**

### Enclosed Dispenser/Faucet Dimensions\*\*\*

Height: from deck to top of dispenser	8"
from deck to tip of dispenser	6 1/4"
Reach: from center of dispenser to tip	6"
Hole: minimum required	1/2"
maximum	1 3/8"



**Note:** Spout pulls out from faucet body and has 2 o-rings at base. Insert completely into bottom of faucet body to prevent leaking. Spout swivels to direct water. Handle and tip can be removed. Handle can be locked up in open position.

\*\* Other faucets check with specifications.

\*\*\*All dimensions are approximate.

**Go to the Inlet Supply Water Connection**



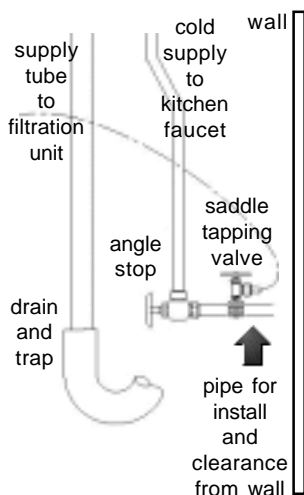
## Basic Inlet Supply Water Connection \*\*

### Professional Installation Using a Preferred Connection is Strongly Recommended

\*\*This unit is supplied with a saddle tapping valve and should be considered a basic connection for copper, steel or brass 3/8" to 1/2" O.D. pipe prior to the angle stop shut-off of the cold water line to the kitchen faucet. This should be considered a "do-it-yourself" connection which is not applicable in many situations and may not meet local codes. A qualified plumber should choose to make the inlet supply water connection by a more preferred method.

### **Instructions from the bag containing the supplied saddle tapping valve, *if applicable***

**Step 1:** From parts bag locate: saddle tapping valve and 4' of 1/4" tubing, color coded: red or orange (supply line to unit).



**Step 2:** Locate cold water line that feeds your existing faucet. Determine if there is enough space to install the saddle tapping valve on the hard line between the wall and the angle stop.

**CAUTION:** USE ONLY COLD WATER LINE. NOT INTENDED FOR SUPPLY BY HOT WATER.

**Step 3:** Shut off the main water supply to the house and open the faucet to relieve water pressure in the hard pipe. NOTE: Shutting the angle stop only, still leaves water in that pipe. Shut the main supply.

**CAUTION:** Do not turn valve handle before or while installing the "saddle tapping valve". Make sure the piercing lance does not protrude beyond the rubber gasket. Failure to do this may result in damage to the piercing needle.

**NOTE:** For Copper Pipe - go directly to #4.

For Steel or Brass Pipe - follow A, B, C below, then go to #4

**A:** Drill a 3/16" hole in pipe. Use a hand drill to avoid shock hazard.

**B:** Turn handle to expose lance beyond the rubber gasket no more than 3/16".

**C:** Place body of valve over hole so the lance fits into the hole

**Step 4:** Loosely assemble saddle tapping valve on pipe

**A:** For all 3/8 O.D. pipe, use side of bracket with side projections toward or against pipe to prevent distortion of tubing.

**B:** For all 1/2 O.D. pipe, use "V" side of bracket with that notch toward or against pipe.

**Step 5:** Tighten screws evenly. Make sure brackets are parallel, then tighten firmly until the valve is not moving on the pipe.

**CAUTION:** Do not over tighten fittings.

**Step 6:** Connect the 1/4" plastic tubing to the saddle tapping valve by following these instructions:

**A:** Slide 1/4" compression nut over plastic tubing with threads toward the saddle tapping valve.

**B:** Slide 1/4" plastic ferrule over plastic tubing with long tapered side toward saddle tapping valve.

**C:** Place 1/4" brass insert sleeve into the end of the 1/4" orange/red plastic tubing.

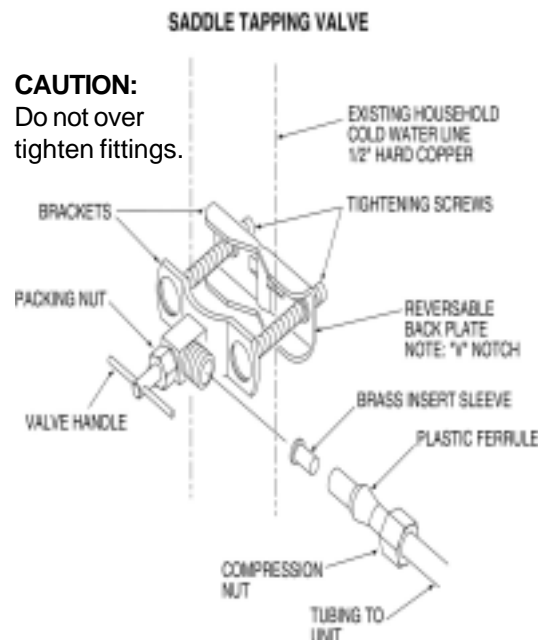
**D:** Insert orange/red tubing into saddle tapping valve. Leave other end available for system interconnection

**E:** Tighten compression nut onto saddle tapping valve.

**Step 7:** Be sure the packing nut is tight, then turn the handle of the saddle tapping valve clockwise until it is firmly seated. **NOTE:** For Copper Pipe - the pipe is now pierced.

**HINT:** Back the end of the piercing lance out, turning the handle counter-clockwise. Then re-insert by turning the handle of the saddle tapping valve clockwise until it is again firmly seated. This will clear any possible debris that can block piercing lance and water flow.

**Step 8:** Turn the handle counter-clockwise to open the valve for water supply. Keep main line shut off and proceed with the remainder of the installation and start-up.





## Preferred Inlet Supply Water Connection - All Applications

### Professional Installation Using a Preferred Connection is Strongly Recommended

A qualified plumber should choose to connect the inlet supply water supply by a more preferred connection. \*\*\*

### **The Preferred Inlet Supply Water Connection is Applicable in All Applications and Codes Replace the Angle Stop with a Proper 3-Way Fitting:**

There are a number of options to properly install any one of these drinking water filtration systems.  
Identify the cold water supply line and then you will need to know;

- Size or O.D. diameter of pipe or tubing
- Pipe material (hard or soft copper, steel, brass, stainless, PVC, plastic, etc...)
- The existing angle stop or fitting will assist in determining the proper 3-way angle stop or fitting needed for your specific application

A more preferred method to connect the inlet supply line is to shut off the water main and replace the entire angle stop. This will have a connection from the house main water line, a connection to the cold water side to the kitchen sink faucet and a much better connection for the inlet supply to the filtration unit. This will provide one fitting with a shut off to the kitchen faucet and a shut off to the filtration system. The replacement of the angle stop is a better plumbing connection and any number of fittings can be used for the correct application under any circumstances.

Examples of common connections and fittings available:

• **OPTIONS:**

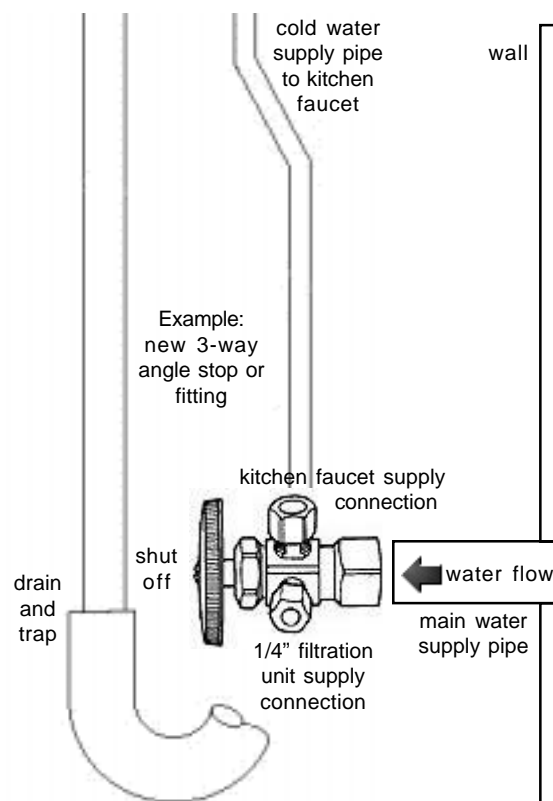
1/2" IPS x 3/8" compression x 1/4" compression  
3-way angle stop

• **OPTIONS:**

1/2" compression x 3/8" compression x 1/4" compression  
3-way angle stop

**Note:**

Be sure one outlet is 1/4" compression  
for the water filter 1/4" inlet/supply tubing



Proper installation is dependent on your specific application and the concept of proper installation is universal.  
Locate the supply, shut off your main water supply, install the proper connections  
and follow the remaining instructions in this manual.

\*\*\*EWS, Inc. can not anticipate all the different locations, applications and materials used by your builder and/or plumbing contractor regarding your household or sink piping, therefore we offer a generic and common fitting with proper instructions. A qualified plumber, plumbing supply location, or hardware store will have no problem with alternative parts and advice necessary to install your unit.

**Go to the Placement or Locating the System**



## Placement or Locating the Reverse Osmosis System

Simply place the water system on a level floor, cabinet bottom or horizontal surface.  
Always assume for enough space for the system and the storage tank, and tubing to remove, move and/or adjust for filter and membrane replacement and maintenance.

If mounting the system to a wall, cabinet side or other vertical surface,  
Please see the following;

- Step 1:** All filter cartridges and membranes for system are preinstalled. If the unit is installed in a permanent hanging position, a minimum clearance of 2" will be required to allow filter replacement.
- Step 2:** Mark pilot holes using the bracket as a template.
- Step 3:** Using a drill bit or punch, drill a hole or punch as a starter hole to catch the mounting screws.
- WARNING:** ALTERNATIVE FASTENING METHOD MAY BE REQUIRED FOR PLASTER BOARD, PARTICLE BOARD OR SIMILAR MATERIAL INSTALLATION. USE SAFETY GLASSES OR OTHER EYE PROTECTION TO PREVENT POSSIBLE EYE INJURY DUE TO FLYING PARTICLES.
- Step 4:** Set mounting screws (provided) with screw driver. Leave a 1/4" gap between the screw head and mounting surface to allow the bracket to slide on easily.
- Step 5:** Slide the bracket over the screws and hang the unit. Make sure unit is level.  
Now make the connections of tubing to/from the system.
- WARNING:** UPON INSTALLATION AN R.O. SYSTEM MAY HAVE TO BE "BURPED" OF ANY AIR IN THE LINES. UPON COMPLETION OF THE "SYSTEM START-UP AND OPERATION PROCEDURES", REVIEW THIS WARNING AND DIRECTIONS ON PAGE 4.2-16.
- Note:** The interconnection between the inlet, outlet, drain and tank lines can cause air in the unit at the RSR control valve. Air in lines, and at this valve, will not allow R.O. to function properly.

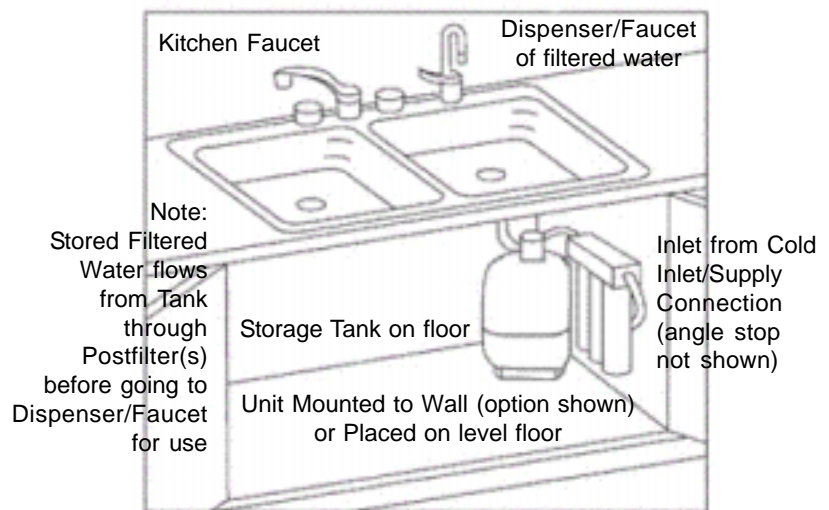
### Helpful Hint:

Find the enclosed Spanner Wrench that came with the unit and place it on top of the bracket.

When finished, roll up this Service Guide and place on top with wrench.

Take a note of the Model # and WQA Serial # for the required warranty registration of this unit.

This Service Guide and the wrench will come in very handy when it's time for filter replacement.



*strictly for illustration purposes only*

**Go to the Placement or Locating the Storage Tank**

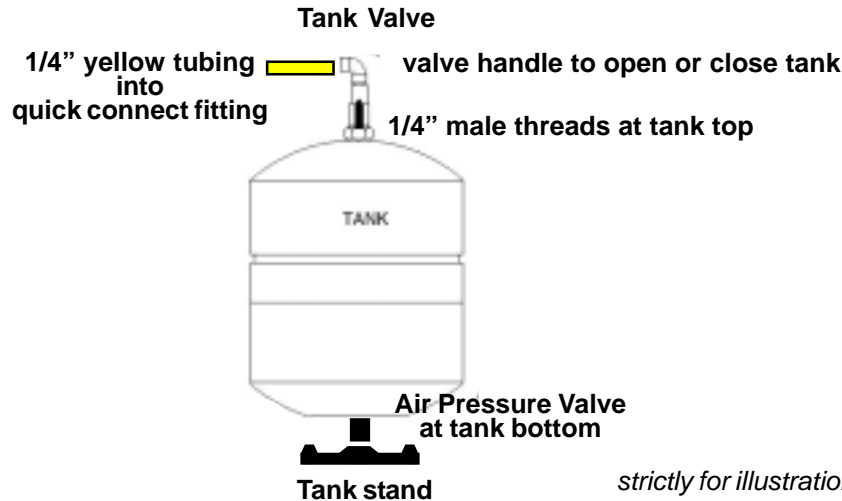


## Placement or Locating the Storage Tank

Open the box containing the storage tank and plastic base.

Place storage tank on the plastic base near the system and allow for room for connections.

Locate the Tank Valve in the parts box



### Storage Tank:

The storage tank holds up to 3.2 gallons of product water. A bladder within the tank keeps water under pressure and away from bare metal. The tank has an air pre-charge of 5-7 psi (without water) from the factory.

### Storage Tank Preparation: Locate the following:

plastic tank stand, tank valve, 1/4" male threads at top of tank, and the air pressure valve at bottom of tank

- Step 1:** Air pressure valve seats into tank stand when tank is in upright position. Place tank on stand.  
Note: Tank may be placed on its side, if necessary. Use tank stand to prevent rolling.
- Step 2:** Using Teflon tape (not included) wrap 1/4" male threads on storage tank using clockwise motion for at least three revolutions.
- Step 3:** Install tank valve on storage tank. Do this by hand tightening valve clockwise onto male threads of the storage tank. There is no need to overtighten

### **KEEP TANK VALVE CLOSED.**

**DO NOT OPEN TO ANY WATER UNTIL INSTRUCTED TO DO SO.**

**Closed Valve** 90° angle to the yellow tubing and connection

**Open Valve** In line/parallel with yellow tubing and connection

### **WARNING ABOUT TANK PRESSURE:**

USE ACCURATE (0-20) GAUGE FOR LOWER READINGS TO MEASURE. IF NEEDED TO ADJUST, EMPTY TANK, USE A SIMPLE BICYCLE OR SPORT BALL PUMP ONLY. DO NOT OVER-INFLATE TANK PRESSURE. The tank should be 5-7 psi without water for proper operation. Pressure variances due to higher elevations may occur. Under or over-inflation will prevent proper operation of system.

**Go to Drain Installation and Connection**



## Drain Installation and Connection

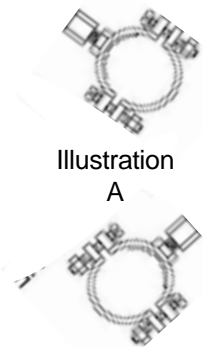
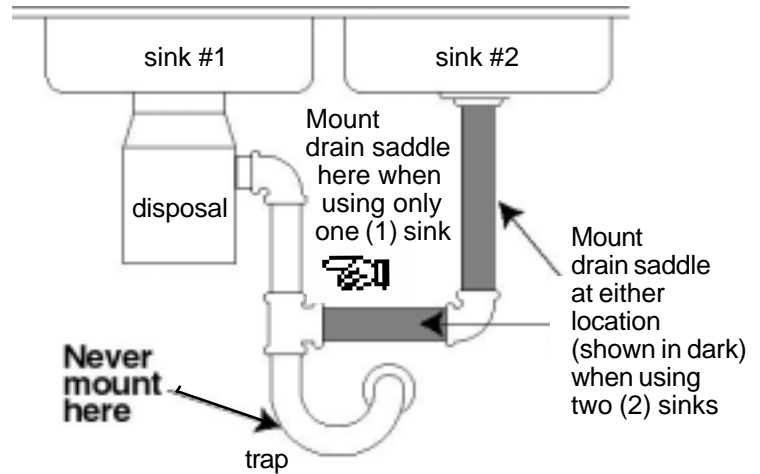


Illustration  
A

### WARNING:

Never mount off the garbage disposal drain pipes.  
When installing drain saddle on a horizontal pipe - install connection at the 10 o'clock or 2 o'clock position (as illustrated to the left)  
This allows for the proper flow of RO rejection water and will help to prevent any cross-contamination



*strictly for illustration purposes only*

### Step 1:

From the parts bag locate:

Drain saddle assembly and the 1/4" x quick connect fitting that is needed for the application

For use with a non-air gap installation: use (smaller) 1/4" quick connect fitting x 1/4" mpt

For use with an air gap installation: use (larger) 3/8" quick connect fitting x 1/4" mpt

### Step 2:

Place the drain saddle but do not tighten.

Placement of drain saddle should be located on the vertical tail piece of the plumbing system at least 2" above the horizontal outlet or trap assembly.

### NOTE:

On the vertical pipe: The higher the placement on this pipe, the greater the chance of increased noise in your waste line. Drain connection should be pointing out or towards you as you look into the cabinet.

On the horizontal pipe as an alternate location: See illustration A, the drain saddle should be at a 10 o'clock or 2 o'clock position

### Step 3:

Once the drain saddle is placed, use a 1/4" drill bit, and drill a hole slightly above the drain saddle. Do not drill through the other side of the pipe.

Make sure the one hole is complete with clean edges and clear of debris.

### WARNING:

IF DRILLING METAL PIPE, PROTECT YOURSELF FROM SERIOUS INJURY OR FATAL SHOCK, USE A HAND DRILL OR A CORDLESS DRILL TO MAKE THE HOLE. IF YOU USE AN ELECTRIC DRILL, OUTLET MUST BE GROUNDED. USE SAFETY GLASSES OR OTHER EYE PROTECTION WHEN GRINDING TO PREVENT POSSIBLE EYE INJURY DUE TO FLYING PARTICLES.

### Step 4:

Loosen drain saddle and slide over the 1/4" hole. Make sure the hole in the drain pipe is aligned with the hole in the drain saddle. Tighten drain saddle using a screwdriver, alternating sides for even tightening.

### Step 5:

Using Teflon tape (not included) wrap 1/4" male threads on 1/4" x quick connect fitting (selected for air gap or non-air gap application) using clockwise motion for at least three revolutions. Hand tighten fitting clockwise into drain saddle. There is no need to overtighten.

**Go to the Connections of Tubing**



## Connection of Tubing for Reverse Osmosis Systems

**Step 1:**           **Before Making the Connections - Remove Colored Vinyl Plugs Correctly**  
This system may have come with sample plugs. Please remove before installation.

**WARNING:**   NEVER ATTEMPT TO REMOVE TUBING OR SAMPLE PLUGS BY JUST PULLING.  
 Follow simple instructions illustrated below to remove properly.

**INSPECT:**   Inspect the fitting for any damage from shipping, handling and/or delivery. STOP, if collet is damaged in any way; call, fax or e-mail customer service for a replacement fitting.

**Step 2:**                           **Making the Connections from Inlet/Supply to Unit,  
 Faucet/Dispenser to Unit, Unit to Tank, and Unit to Drain**  
FOLLOW INSTRUCTIONS AND ILLUSTRATIONS FOR PROPER TUBING CONNECTIONS  
**DO NOT TURN ON ANY WATER TO UNIT UNTIL INSTRUCTED TO DO SO.**

**Step 2a:**           Inlet/Supply Connection to Unit:                   Orange/Red tubing  
 Connect the installed orange/red tubing from the installed Inlet/Supply Connection to the location of the unit labeled "FEED". This is the raw supply water into the system.  
 • For all 5-Stage Units, "FEED" is into the "Sediment" housing on the bracket

**Step 2b:**           Faucet Connection to Unit:                   Blue tubing  
 Connect the installed blue tubing from the installed dispenser/faucet to the location on the unit labeled "FAUCET". This is the filtered water from the system.  
 • For all 5-Stage Units, "FAUCET" comes from the "Postfilter" housing on the bracket

**Step 2c:**           Unit Connection to Storage Tank:                   Yellow tubing  
 Connect the yellow tubing from the location on the unit labeled "TANK" to the installed Tank Valve on Storage Tank. The fitting on the unit will always be a 3-way, swivel "T" quick connect fitting and may have an inserted sample yellow tube (remove sample).  
 • For all 5-Stage Units, "TANK" is located at 3-way, swivel "T" quick connect fitting on the In-Line "Postfilter" on top of the unit

**Step 2d:**           Unit Connection to Drain Connection(s):                   Black tubing (1/4" and 3/8")

Air Gap:           Connect the black 1/4" tubing from the location on the unit labeled "DRAIN" to the 1/4" barb on the air gap adaptor. Then, connect the black 3/8" tube from the 3/8" barb on the air gap adaptor to the 3/8" quick connect fitting installed on the drain saddle.

Non Air Gap:   Connect the black 1/4" tubing from location on the unit labeled "DRAIN" to the 1/4" quick connect fitting installed on the drain saddle.

• For all Units, "DRAIN" is located behind the membrane housing at the back/top of the bracket at the RSR control valve (this valve has 5 other installed connections). The "DRAIN" fitting may have an inserted black sample tube

**See the Connection of Tubing Illustrated**

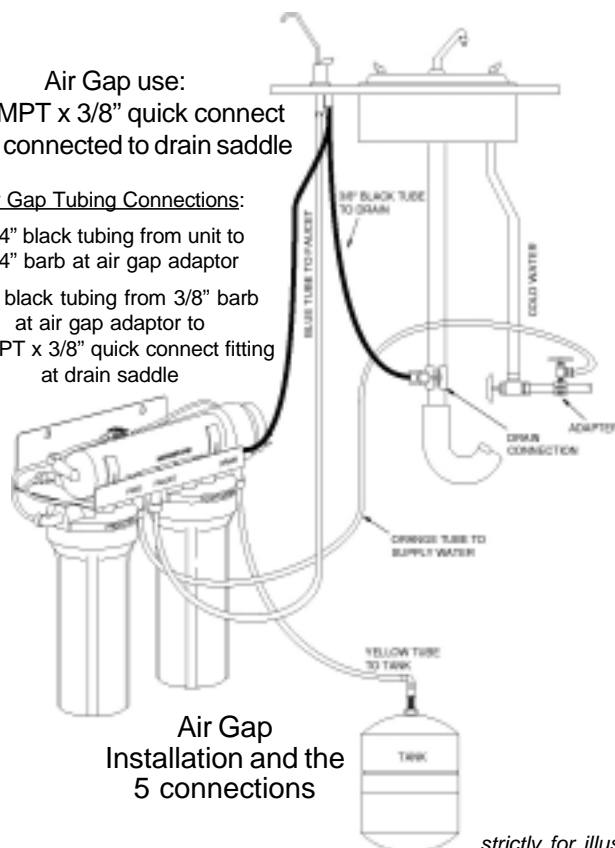


## Connection of Tubing Illustrated

**Air Gap use:**  
1/4" MPT x 3/8" quick connect fitting connected to drain saddle

**Air Gap Tubing Connections:**

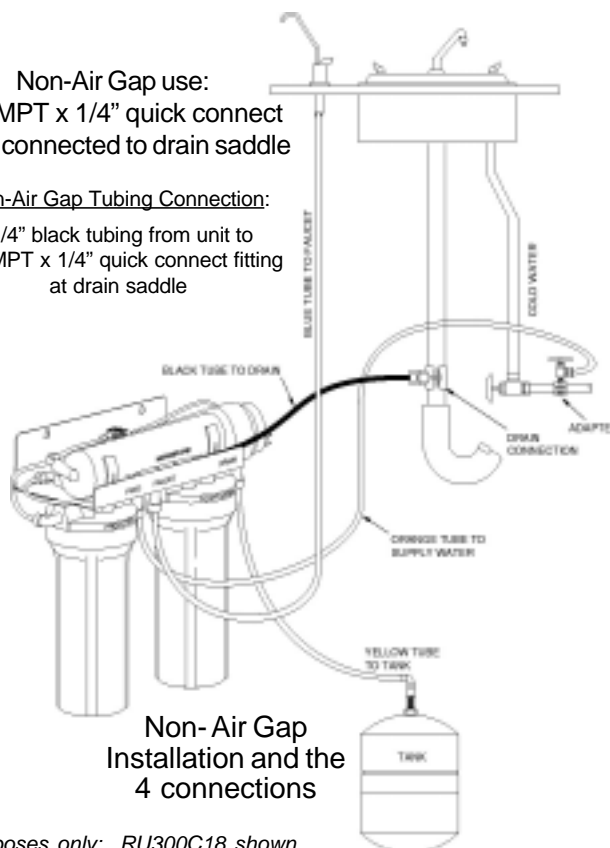
- 1/4" black tubing from unit to 1/4" barb at air gap adaptor
- 3/8" black tubing from 3/8" barb at air gap adaptor to 1/4" MPT x 3/8" quick connect fitting at drain saddle



**Non-Air Gap use:**  
1/4" MPT x 1/4" quick connect fitting connected to drain saddle

**Non-Air Gap Tubing Connection:**

- 1/4" black tubing from unit to 1/4" MPT x 1/4" quick connect fitting at drain saddle

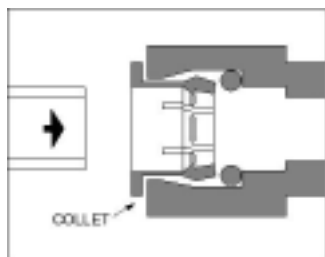


*strictly for illustration purposes only: RU300C18 shown*

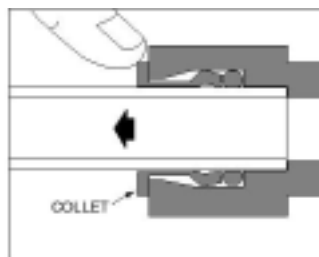
Note: 4- & 5-Stage RO Units and those with UV and pump options may have slightly different connection configurations. Follow Connection of Tubing Instructions, labeling and/or sample tubing.

Never Pull Tube Out To Remove  
Push Collet In To Release

To Insert, Press Tubing In Firmly and Completely



SIMPLY PUSH IN TUBE TO ATTACH



PUSH IN COLLET TO RELEASE TUBE

To Test Integrity of Fitting,  
Give a Gentle "Tug" To Insure Proper Connection

See All Cautions, Warnings and Inspections

- CAUTION:** Always leave the tubing provided to allow lifting the unit for filter replacement and maintenance. Make sure tubing has gentle curves. Roll and secure as needed. Do not bend or kink tubing. We do not recommend shortening the tubing, however, if needed, at end, cut tube straight and do not flatten. Avoid any tubing contact to hot water lines.
- WARNING:** NEVER ATTEMPT TO REMOVE TUBING BY JUST PULLING. Follow simple instructions illustrated above to remove properly.
- INSPECT:** Upon installation, inspect the connection and give the tubing a gentle "tug" to insure proper connection and integrity of the fitting. Inspect the fitting for any damage from shipping, handling, delivery, and/or installation. STOP, if collet is damaged in any way; call, fax or e-mail customer service for a replacement fitting.

**Go to the System Start-Up and Operation Procedures**



## System Start-Up and Operation Procedures

Reverse Osmosis Systems have specific issues with air in system, proper pressure in tank, the proper draining of reject water, and proper connection between various components.

**Follow these procedures for new installations and all filter/membrane replacements.**

A proper start-up insures the system is without issues.

If anything is discovered, this is the time to discover it and correct any problems or questions that arise. Lack of a proper start-up will void the warranty.

---

### Only For Units with Electrical Connection: Units with UV Option and/or Booster Pump Option

**Step 1A:** Connect UV lamp cord and plug in transformer unit to typical 110v electric outlet.

**Step 1B:** Connect Booster Pump cords and plug in transformer unit to typical 110v electric outlet.

**NOTE:** Electrical outlet must be dedicated and unswitched. Be aware of any GFI outlets and the need to reset. Surge suppression highly recommended.

---

### For All Units:

**Step 2:** Close inlet water supply to the system.  
Turn off water supply to other devices that may be connected to this unit.

**Step 3:** Close storage tank valve. Storage tank valve should be closed. Tank valve handle is perpendicular or at a 90° angle to the yellow tubing connected into the tank valve.

**Step 4:** Pull up and lock dispenser/faucet handle in open position (if using another type of dispenser - put into open position).

**Step 5:** Turn on any main water supply which was shut off earlier (usually for new install).  
Open inlet water supply to the system.

**NOTE:** Initially you may observe a sputtering. It may take up to 10-15 minutes for water to begin to drip from dispenser/faucet.

**Step 6:** Once a steady drip is available (drips about a gallon of water per 1-1 1/2 hours),  
Close the dispenser/faucet

**Step 7:** Open storage tank valve, so that tank valve handle is parallel or inline with the yellow tubing connected into the tank valve.

**Step 8:** Allow system to fill the tank twice and drain both tanks of water produced before actual use\*\*. This will wash carbon fines, membrane preservatives, and air\*\*\* from the system. This process may take in excess of 10 hours.

**NOTE:** This correct procedure of "fill then empty, fill then empty, and final fill" may be a full day or an overnight procedure. This is the proper way this type of system is started up.

**Continue with the proper start-up of the reverse osmosis system**

## System Start-Up and Operation Procedures - Continued



## System Start-Up and Operation Procedures - Continued

Continue with the proper start-up of the reverse osmosis system

**Step 9:** Allow system to fill (this may take up 7 hours) and use as normal. If applicable, only open water supply to other devices connected to this unit after storage tank is filled.

**Step 10:** Inspect for leaks at all connections, fittings and/or housings. If a problem exists, please shut off water supply to the system and consider the following solutions;

- Plumbing connections at the inlet/supply connection, saddle tapping valve, or angle stop. Please review all plumbing procedures and correct.
- Plumbing connections to dispenser/faucet and any other fixtures or cross-connections. Please review and correct.
- Inspect for leaks at all unit connections such as connections between housings, the membrane &/or cartridge housings. Report any issues for assistance or needed part(s).
- Inspect for leaks at all tubing connections and the labeled "Feed" and "Faucet" connections between the supplied tubing and the quick connect fittings. To insure proper connection, give a light "tug" (not a hard pull) on tubing to check the grip on all fittings.

**\*\*CAUTION:** Do not drink water from system until start-up procedures have been completed and system has been flushed properly. Improper start-up may result in poor performance of the system. Proper procedure will rinse and purge system. Do not make water available to any ice-makers, refrigerators or any other devices until the system is completely flushed.

**\*\*\*WARNING:** UPON INSTALLATION OR FILTER/MEMBRANE REPLACEMENT AN R.O. SYSTEM MAY HAVE TO BE "BURPED" OF ANY AIR IN THE LINES.

### **YOU MAY HAVE TO FOLLOW THIS PROCEDURE TO FINALIZE THE INSTALLATION:**

CLOSE THE TANK VALVE (See page 4.2-11), CLOSE (if applicable) WATER SUPPLY TO OTHER DEVICES CONNECTED TO THIS UNIT, OPEN AND LOCK DISPENSER (observe sputtering from dispenser or a slow drip), THEN ROTATE THE UNIT 90 DEGREES CLOCKWISE AND HOLD IN VERTICAL POSITION, AFTER A MINUTE RETURN UNIT BACK TO HORIZONTAL POSITION, THEN ROTATE THE UNIT 90 DEGREES COUNTERCLOCKWISE AND HOLD IN THAT VERTICAL POSITION. AFTER 1 MINUTE, RETURN UNIT BACK TO HORIZONTAL POSITION. WATER SHOULD DRIP AT A STEADY FLOW (about 1-11/2 gallons per hour) WITHOUT SPUTTERING OR ANY GURGING SOUND. REPEAT AS NEEDED. THEN CLOSE DISPENSER, OPEN TANK VALVE, OPEN (if applicable) WATER SUPPLY TO OTHER DEVICES.

**NOTE:** Cloudy Water - If you draw your water into a glass and it appears to be cloudy, it's only air and nothing bad. Let the glass sit and watch the air rise and dissipate. The filter cartridges used are full bed depth. The carbon (GAC) cartridges have a great deal of surface area. It may take 24-48 hours for this to correct itself after you have filled and emptied the tank 2 times.

■ If any damage was identified in shipping or handling. You'll need to make a claim with the shipper, as indicated on our Packing Materials, our Packing Slip and the published General Terms and Standard Conditions of Sale.

■ If you have identified a problem, please contact our offices. The Best Way; go to [www.ewswater.com](http://www.ewswater.com), click button "Contact Us" and click link to "Customer Service and Help", fill out the form and help will be on the way. Let us know if we can offer advice on a plumbing issue that may not be related to the actual unit, or a question or issue that may be unit related. If in need of a part under warranty we can readily send it. Parts (original only) needed out of warranty can be obtained through your contractor, local distribution or at [www.waterontheweb.com](http://www.waterontheweb.com).

**WARNING:** Maximum pressure is 65 PSI. Pressure unregulated can surge or exceed the maximum rating on this and many items in the home. High pressure creates a water hammer or banging pipes. It's also the reason to use stainless hoses for washer machine connections and not the rubber. A pressure reducing valve (PRV) at your main water service line (if not code) is greatly recommended by many manufacturers' of many different household items, plumbing products and appliances and must be checked annually. A point of use (sink location) pressure limiting valve is also available.



## Register this Product - It is a Requirement for Warranty

- Familiarize yourself with the system, its' replacement filters and maintenance.  
  
To Register, take note of the Model # and WQA Serial # found on the unit's bracket,
- Understand your system's capabilities, put the enclosed Spanner Wrench and this Service Guide on top of the unit bracket,
- See your options in water treatment, for you , your family and your home by EWS, Inc.
- **Register Your System**  
our confidential data base will remind you to replace your filters, use our enclosed form which you can fax or mail to our offices, or register on-line at [Www.ewswater.com](http://Www.ewswater.com).

## Replacement of UV Lamp (if applicable)

**UV Lamp should be changed annually based on tested results to maintain UV effectiveness.**

**NOTE:** Electrical outlet must be dedicated and unswitched. Be aware of any GFI outlets and the need to reset. Surge suppression highly recommended. Not responsible for bulb that may expire prior to annual service.

### Step 1:

Unplug the transformer. Then disconnect the UV lamp cord.

**NOTE:** All R.O. Units with UV Option:  
UV module is set on top of bracket (easy access)

### Step 2:

Pull firmly on the UV lamp tail only to remove the lamp.  
Do Not remove cap at top of UV Module  
(If needed, snap the UV module from the bracket clips to gain access for lamp removal).

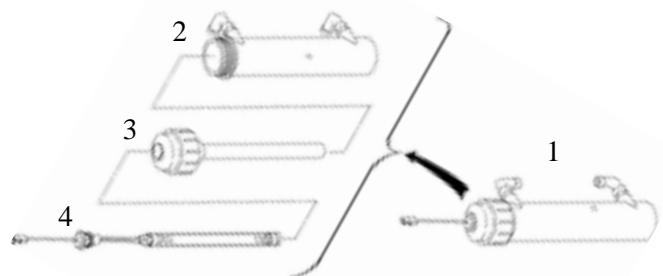
### Step 3:

Insert and firmly press new UV lamp into the top of the cap.  
(If applicable, snap the UV module back into the bracket clips).

### Step 4:

Reconnect UV lamp cord. Plug in unit transformer.

*strictly for illustration purposes only*



- 1 - Fully Assembled UV Module
- 2 - UV Module Housing
- 3 - UV Cap with Quartz Glass Sleeve
- 4 - UV Lamp with Lamp Cord

**WARNING:** DO NOT DISCONNECT UV MODULE FROM THE FACTORY CONNECTIONS AND DO NOT OPEN UV CAP FROM UV MODULE FOR TYPICAL UV LAMP REPLACEMENT.

## Replacement of Filter Cartridges - All RO Units

It is recommended that all filters be changed at least annually or more frequently based on usage and local water conditions. The quantity and quality of the water processed effects the life of the filters.

### Step 1:

Open dispenser/faucet. Lock handle in the up and open position and allow water to flow. Water will eventually only drip then almost come to a stop. Now go to Step 2. Keep dispenser/faucet open until instructed to close.

### Step 2:

When water has come to a stop or very slow drip, Close inlet water supply to the system.

### Step 3:

Using your spanner wrench, turn housing (which contains the filter cartridge) counterclockwise to loosen. Remove housing.

### Step 4:

Remove filter and dispose.

### NOTE:

See optional disinfection procedure of empty unit on page 4.1-20 before replacing any filters, membranes, or UV lamp (if applicable)

### Step 5:

Insert new filter(s), replace and tighten housing by turning clockwise.

### CAUTION:

The GAC Postfilters (GAC-00 on all RO Units, RO-F-GAC-500 on 5-Stage RO only) has a gasket that must be at the top of the filter to be replaced correctly. All other filters do not have a top or bottom and can be inserted either way.

### CAUTION:

Inspect O-Ring for housing base. Make sure it is clean, free of any debris and not damaged or kinked. Make sure it is correctly seated into the channel inside the housing before replacement.

### Step 6:

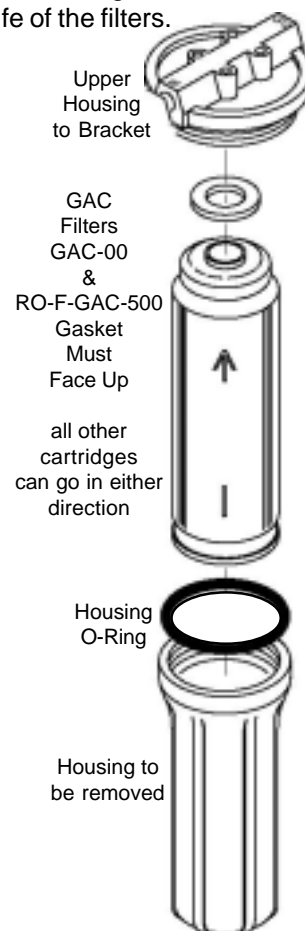
**ONCE NEW FILTERS/MEMBRANE HAVE BEEN REPLACED - CHECK AND FOLLOW ALL APPROPRIATE STEPS FOR "SYSTEM START-UP AND OPERATION PROCEDURES"**

### CAUTION:

WATER WILL BE PRESENT WHEN FILTERS ARE CHANGED.

A pan, towel, etc. should be placed under the housings to catch any water.

*strictly for illustration purposes only*



## Replacement of In-Line Postfilter - 5 Stage Units

**NOTE:** In-Line filters are labelled as a "Postfilter" on top of all 4- & 5-Stage Units. The filter is a self-contained cartridge. Replacements do not come with fittings. Follow instructions for the removal and replacement of these cartridges.

**Step 1:** Identify the end of the filter cartridge with the swivel "T" connection with two (2) tubes.

Yellow tube is always straight in. White tube is always at the bottom of the "T".

**Step 2:** Disconnect the white tube and the yellow tube. Disconnect fitting from the filter cartridge by turning counter-clockwise. Keep for re-connection.

**Step 3:** Identify the end of the filter cartridge with the connection with one (1) tubing fitting:

**Step 4:** Disconnect the blue (4-Stage Units) tube or white (5-Stage Units) tube. Disconnect fitting from the filter cartridge by turning counter-clockwise. Keep for re-connection.

**Step 5:** Using Teflon tape (not included) wrap threads on the quick connect fittings in a clockwise motion for at least three revolutions. Re-connect the quick connect fittings on the new filter cartridge by hand tightening fitting clockwise into the filter cartridge. **DO NOT OVERTIGHTEN**

### CAUTION:

In-Line cartridges have a proper water flow direction - Note the word "FLOW" and the Arrow ➡ on top of the cartridge.

4-Stage: Units: IN from the swivel "T" (white & yellow tube) ➡ TO the single connection with blue tube.

5-Stage: Units: IN from the single connection with white tube ➡ TO the swivel "T" (white & yellow tube) connection.

**Step 6:** Re-connect all the tubing into the correct fittings and locations.

White and yellow tubes at "T" connection. Single blue (4-Stage) or white (5-Stage) tube at other connection.

**WARNING: FOLLOW THE CORRECT PROCEDURES FOR THE REMOVAL AND INSERTION OF TUBING**

**Step 7: FOLLOW ALL APPROPRIATE STEPS FOR "SYSTEM START-UP AND OPERATION PROCEDURES"**

## Replacement of Membranes - All RO Units

**Step 1:** Open dispenser/faucet. Lock handle in the up and open position and allow water to flow. Water will eventually only drip then almost come to a stop. Now go to Step 2. Keep dispenser/faucet open until instructed to close.

**Step 2:** When water has come to a stop or very slow drip, Close inlet water supply to the system.

**Step 3:** Disconnect the water feed tube from the top of the membrane housing or the membrane housing cap (see the end of the membrane housing with one fitting). See diagram below.

**CAUTION:** **FOLLOW PROPER TUBING CONNECTION INFORMATION (Found on Pages 4.1-13&14)**

**Step 4:** Open membrane housing by turning membrane housing cap counterclockwise. Remove the old membrane.

**NOTE - DIFFERENT STYLES FOR THE REMOVAL OF MEMBRANES:**

Membranes come standard with a Nipple with Two (2) O-Rings which inserts and seats into the back of the membrane housing (see diagram below). Membranes come in two styles for the removal of the membrane from the housing. Style #1 (pictured in diagram below), may require pliers to remove the membrane. Style #2 is a threaded insert. Using a common screw, thread in clockwise and pull screw to remove membrane.

**NOTE:** See optional disinfection procedure of empty unit before replacing any filters, membranes, and/or UV lamp.

**Step 5:** Place a light coat of food-grade silicone grease or petroleum jelly (not included) on the Two (2) O-Rings and Black Seal before replacement of the membrane.

**Step 6:** Insert the new membrane with the Two (2) O-Ring end in and allow to seat (see diagram below).

**Step 7:** Screw membrane housing cap back on.

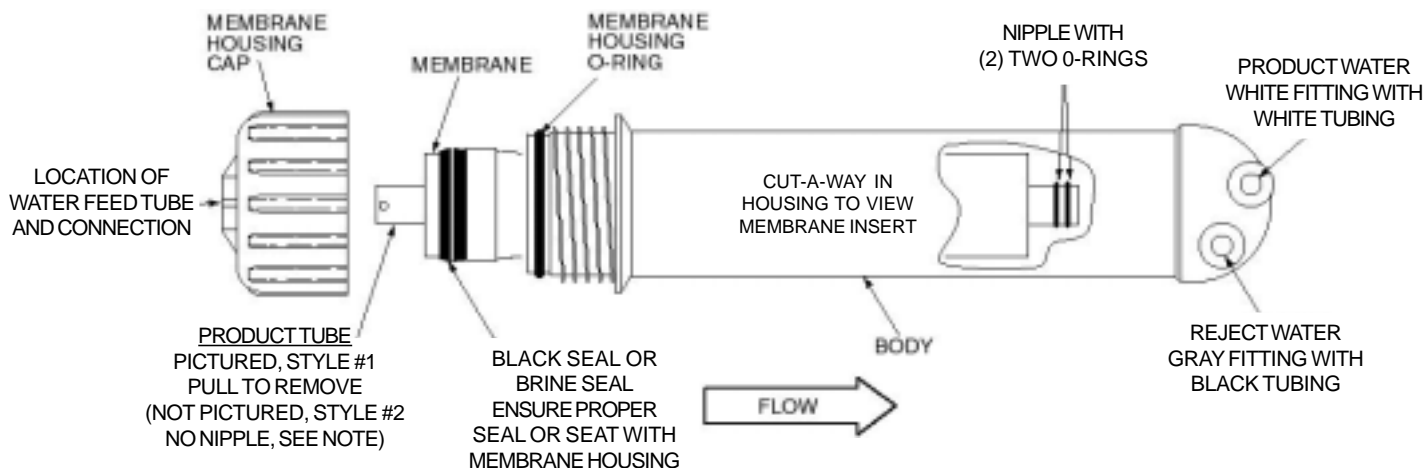
**Step 8:** Re-insert feed water tube into the top of the membrane housing or the membrane housing cap (see diagram).

**CAUTION:** **FOLLOW PROPER TUBING CONNECTION INFORMATION (Found on Pages 4.2-13&14)**

**Step 9: ONCE NEW FILTERS/MEMBRANE HAVE BEEN REPLACED - CHECK AND FOLLOW ALL APPROPRIATE STEPS FOR "SYSTEM START-UP AND OPERATION PROCEDURES"**

**CAUTION:** WATER WILL BE PRESENT WHEN FILTERS ARE CHANGED.

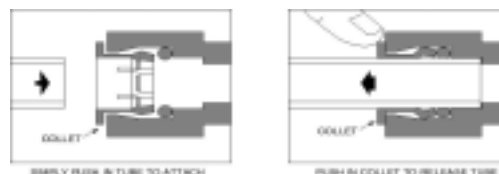
A pan, towel, etc. should be placed under the housings to catch any water.



**NOTE:**

It is recommended that membranes, if possible be tested annually for TDS and changed as needed, based on usage and local water conditions. All filter housings with filters labelled "Prefilter", "Sediment" &/or "Carbon" must be replaced once a year, or as needed, to protect membrane. The quantity and quality of the water processed affects the life of all filters and membranes.

**illustrated quick connect fitting and proper tubing connection**



## R.O. - Cleaning of Empty Housings

### NOTE:

All containers, surfaces and items exposed to water can accumulate a clear or discolored film which may also be slippery or slimey to the touch. This is a bio-film that is non-pathenogenic and usually of no harm.

This film is most commonly a nuisance and is readily wiped off. It is this reason we suggest a simple cleaning procedure prior to returning new filters and membranes to the reverse osmosis system.

This procedure may be performed at any time when changing filters and membranes, or after extended periods of inactivity of the system.

### Step 1:

**A:** Empty All Available Filter Housings\*\* by Following Steps 1 through 4: R.O. - Replacement of Filter Cartridges. (Open faucet, Close inlet water supply, Empty all housings of their filters)

**B:** Empty Membrane Housing by Following Steps 3 and 4: R.O. - Replacement of Membranes. (Steps 1 and 2 have been already done, see above "A", Empty housing of the membrane)

**\*\*NOTE:** All 4 and 5-Stage Units have In-Line PostFilters. These self-contained filters are not included in this procedure.

**Step 2:** Using disinfecting wipes, mild cleaning solution, and/or warm water and soap - simply wipe around the housings and any exposed areas. Remove any film and/or discoloration. Repeat, if needed. Rinse thoroughly.

**Step 3:** Follow all procedures for the replacement of the filters and the membrane.

**CHECK AND FOLLOW ALL APPROPRIATE STEPS FOR "SYSTEM START-UP AND OPERATION PROCEDURES"**

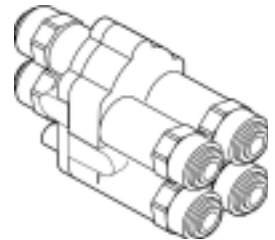
## RSR-150

TFC Membranes  
5-Stage Units

## Control Valves

Installed on every R.O. Unit produced by EWS, Inc. This one control valve takes the place of up to 3 devices commonly needed in a reverse osmosis system and can be easily replaced if needed.

- 1) The control valve monitors the water entering the storage tank and when the storage tank is full, the valve turns off the water processing of the system. Less Waste.
- 2) The control valve regulates the correct amount of reject water flushed to the membrane.
- 3) The control valve has a positive sealing check valve. The check valve accurately monitors internal pressure and protects the system from pressure surges and reverse flows which could damage the membrane.



**Note:** It is important to completely empty the storage tank monthly to provide a complete tank of fresh water to prevent TDS "creep" which prevents the proper pressure on this control valve and within storage tank.

## Correct Application of Booster Pumps - 5-Stage Units

The pump is replaceable as needed and is always installed after the first stage ("Sediment") and provides the proper and required and constant pressure (minimum 40 PSI) through the membrane.

Booster pumps are critical to the effective performance of reverse osmosis membranes and are recommended in applications where feedwater pressure is less than 40 PSI. Feedwater high in Total Dissolved Solids (TDS) may need a boost, in order to perform within rejection parameters.

**Standard Components: Always connect in the following order:**

**1) Transformer 2) TSO-Tank Shut-Off Switch 3) Pump**

**Tank Shut-Off Switch:** Mounted in-line with the hydro-pneumatic pump as close to the tank as possible, this switch will automatically turn the booster pump off when the tank is full.



Pump comes fully assembled with RU500T35 units

**NOTES**

What unit(s) do I have? What filters do I need to order?  
Reminder to Register your Purchase  
[www.ewswater.com](http://www.ewswater.com)

**Helpful Hint:**

Find the enclosed Spanner Wrench that came with the unit and place it on top of the bracket.

When finished, roll up this Service Guide and place on top with wrench.

This Service Guide and the wrench will come in very handy when it's time for filter replacement.

## Filter, Membrane and UV Lamp Replacements

**Model No: PRESED-05**

**Pre-Sediment Filter (5-micron)**

5-Micron Prefilter is a pure polypropylene full-bed depth filter with exceptional dirt holding capability. The removal of any dirt, silt, rust or suspended matter protects the remaining cartridges and extends the performance of other filters and membranes. Meets FDA requirements for food and beverage contact.

**In Use: All Reverse Osmosis Units (all housings on the right side of unit at the "Feed" water)**



**Model No: GAC-00**

**Granular Activated Carbon (GAC) Postfilter**

Filter is designed for effective reduction of taste, clarity and odor problems such as Chlorine and VOC's. Cartridges are designed to allow water to pass through entire carbon bed to allow maximum adsorption. Meets or complies with NSF Standard 42.

**In Use: All Reverse Osmosis Units "Postfilter" 5-Stage Units**



**Model No: RO-M-TFC**

**TFC Membranes - Reverse Osmosis Systems**

TFC membrane removes Total Dissolved Solids to improve the taste and quality of water. Tap water is forced by pressure through a semi-permeable membrane while dissolved solids and particulates are left behind. The TFC membrane, even though it provides more water per day, is chlorine intolerant and used correctly only on potable, non-chlorinated water. Meets or complies with NSF Standard 58.

**In Use With: RU500T35 series**



**Model No: RO-F-INLINE**

**2" x 10" In-Line Carbon Filter**

Designed specifically to eliminate objectionable tastes and odors from the water supply. This postfilter will reduce most other contaminants that may find their way past the RO membrane to polish the taste of the water. Used in all four and five stage reverse osmosis systems. Meets or complies with NSF Standard 42.

**In Use With: RU500T35 series**



**Model No: RO-F-GAC-500**

**Granular Activated Carbon (GAC) Filter (OCB)**

Designed as a high density GAC filter used as a "Prefilter" to protect the membrane in all 5-Stage Series Units for difficult well water applications. Meets or complies with NSF Standard 42.

**In Use With: "PREFILTER" on All 5-Stage Series**



**\*Replacement of all filters and membranes are based on local water conditions and usage.**

**Recommended to be replaced up to once a year or as needed, not to exceed one year.**

**UV lamp replacement annually (not to exceed one year)**

**Model No: UV-LAMP (lamp only)**

**UV Lamp - UV Bacteria-Kill Units**

UV Unit contains a 6 Watt UV lamp that effectively kills bacteria (>99%). A 316 Bonded Stainless Steel Interior enhances kill power by reflecting UV light and eliminates degradation of polypropylene housing. Due to advanced design, water is spun through the module to eliminate shadowing and shading which additionally maximizes kill power. UV Module meets or complies with NSF Standard 55.

**In Use: All Reverse Osmosis Units with UV Option (w/UV)**



For all removal capacities, test results and compliances. Visit [www.ewswater.com](http://www.ewswater.com)

## Ordering Filters, UV Lamp Replacements, and Parts

There are several ways to obtain and order filter replacements for your unit.

Contact;

- ... your builder, plumbing contractor and/or your installer that provided the product...,
- ... the kitchen & bath showroom, distributor, and/or retailer where you purchased the product...,
- ... or use the internet in the following manner...,

Go to our Corporate Site @ [www.ewswater.com](http://www.ewswater.com) or contact EWS Customer Service and we can direct you to someone who may assist you. As a manufacturer, EWS, Inc. does not sell direct to consumers, only into distribution.

The most convenient way to purchase the correct filters or parts for your unit may be to visit an authorized web distributor such as [www.waterontheweb.com](http://www.waterontheweb.com)

Waterontheweb is very similar to the EWS Corporate Site in order to provide the consumer with the most complete information and an e-commerce solution to the consumer's needs. This site is designed to be simple and prevents any confusion as to what items are needed for any particular unit. This distributor will place their order with EWS, Inc. (similar to any other distributor) and will ship your order directly to the address you designated in the store.

Thank you and we hope we have been of assistance in this matter.  
EWS, Inc. and Environmental Water Systems – Customer Service

## Maintenance Guide - Reverse Osmosis Systems

### INITIAL INSTALLATION

Follow the proper procedures for the set-up, installation and start-up of all systems. Problems (short and long-term) occur when the systems are installed incorrectly. If any questions arise after installation, consult the trouble shooting guide for assistance.

NOTE; ONCE INSTALLED CORRECTLY, THE MORE CONSISTENTLY THIS PRODUCT IS USED THE BETTER.

### REPLACEMENT OF FILTERS, MEMBRANES, AND UV LAMPS (if applicable)

Follow the proper procedures for the shut-down of system, and the removal and replacement of the filters, membranes and/or uv lamp (if applicable). Once a replacement procedure has been completed, the proper start-up of all systems is again as important as it was when the system was first installed. If any questions arise after replacement procedures, consult the trouble shooting guide for assistance.

Note: If the system was fine and only started having issues after the replacement of filters, membrane, and/or uv lamp, than some procedure was not properly followed when re-starting the system.

### MAINTENANCE

Reverse osmosis systems can be a sensitive product not applicable to other drinking water filtration systems because of these various issues;

- Interconnection of system to a storage tank to store production water
- Interconnection of system to a drain line for draining rejection water
- Need for proper line pressure over the membrane for proper water quality and overall function
- Limits to the quantity of available water due to production rates over a day (divide by 24 provides the RO production capacity over an hour) If you empty a tank it can take hours to refill before usage
- Interconnection to other devices, length of tubing for filtered water to travel and the potential for warranty issues with other items due to the aggressive nature of RO water

### MONTHLY

#### ■ Empty Storage Tank

This is a little trick you won't get from someone trying to sell you a service/maintenance agreement.

Empty water from and close any other devices connected to RO unit. Open and lock your dispenser in place in order to empty storage tank completely of water. If you have a dispenser that does not lock open than hold open until tank has been emptied. Wait until you see the water come to a very slow trickle or drip. Close dispenser and allow RO to manufacture a completely new and fresh tank of water. Do this overnight to allow RO to produce enough water before you rise the following day. Once tank is refilled than open other devices connected to RO. This procedure keeps the proper pressure on the tank bladder and on the RSR control valve and allows better water flow, quality and quantity.

#### ■ Check System

Visually check dispenser connections, system connections and drain. Be aware of any excessive household water pressure or changes in your incoming water quality as well as changes in the production water.

### YEARLY

#### ■ Replacement of filters, filter cartridges, in-line filter cartridges, and uv lamp (if applicable).

Note: Replace, as needed, due to local water conditions and usage but do not exceed one year.

■ Membrane can be replaced as a convenience with all other filters on an annual basis (Purchased as a set for your specific RO system). However, membrane may last between 18 months up to 3 years, based on local water conditions and usage.

### STORAGE OF UNIT OR PROLONGED PERIODS OF INACTIVITY, if applicable

■ Empty tank completely, shut off water supply to unit, remove filters and membrane and store in a cool dry location or refrigerator.

■ Upon return, begin a disinfection procedure prior to any filter/membrane replacement, replace filters and membrane, and begin start-up procedure as if it were a new unit.

Regarding a disparity of issues with other competitive RO product. EWS, Inc. does not skimp on quality to produce a cheap product. EWS, Inc. provides the best in product with the most complete information.



## Trouble Shooting Guide - Reverse Osmosis Systems

Problems with Start-Up &/or Filter Replacements	Possible Causes	Solution
No water after installing the system	Improper start-up of the unit upon installation or filter replacement	Start with the start-up procedures and follow them as if the unit was just installed
No water after replacing filters, in-line filters, &/or membranes	<p>It takes hours after a proper install to have a full tank for use</p> <p>The interconnection between the inlet, outlet, drain and tank lines can cause air in the unit at the RSR control valve. Air in lines, and at this valve, will not allow R.O. to function properly.</p> <p>Tank valve is closed</p> <p>Tank pressure is off, Tank pressure too low or too high</p> <p>Connections of tubing incorrect</p> <p>Drain line and/or drain hole restricted or clogged</p> <p>Saddle tapping valve piercing not complete, if applicable</p>	<p>Make sure start-up was performed correctly and wait for tank to fill. Follow instructions for proper start-up</p> <p>Air in Lines "Burping Procedure" Close the tank valve, Close (if applicable) water supply to other devices that may be connected to this unit, Open and lock dispenser (observe sputtering from dispenser or a slow drip). Rotate the entire unit 90° degrees clockwise and hold in vertical position, after a minute return unit back to horizontal position , Then rotate the entire unit 90° degrees counterclockwise and hold in that vertical position, after one minute return unit back to horizontal position, Water should drip at a steady flow (about 1-11/2 gallons per hour) without sputtering or any gurgling sound. REPEAT AS NEEDED. Then close the dispenser, open tank valve, only open (if applicable) water supply to other connected devices once and only once the tank has filled completely.</p> <p>Open valve, in line or parallel with yellow tubing, close other devices and begin proper start-up procedure.</p> <p>The tank air pressure should be 5-7 psi without water in tank for proper operation. Pressure variances due to higher elevations may occur. Under or over-inflation will prevent proper operation of system. Check with accurate (0-20) gauge Empty tank and adjust (if needed) using a bicycle or sports ball pump. Begin proper start-up procedure</p> <p>Inspect and follow all connections of all tubing</p> <p>Follow proper instructions for Air Gap installation and connections Check hole for proper draining and proper drain saddle installation Check for proper drain location</p> <p>Follow instructions to re-do piercing or use the preferred method to make this connection</p>
<p>Leak at fittings and tubing</p> <p>Leak at dispenser or air gap</p> <p>Leak at housings</p> <p>Electrical (if applicable)</p> <p>Water flow and quantity issues</p> <p>Water quality issues</p> <p>Drain issues</p>	<p>Various Possible Causes</p> <p>*****</p> <p>Please review this comprehensive troubleshooting guide to determine the cause</p>	<p>Various Solutions to Specific Issues</p> <p>*****</p> <p>Please consult this comprehensive troubleshooting guide to determine the solution to various RO issues</p>

## Trouble Shooting Guide - Reverse Osmosis Systems

Problem - Leaks Connections & Tubing	Possible Causes	Solution
Any or All Leaks	Excessive pressure or pressure surges above 65 PSI	Pressure reducing valve (PRV) at main water supply to maintain pressure at or below 65 PSI or the addition of a Pressure Limiting Valve (item# FMP-60) on the inlet tube prior to the point of use unit
Leaks at any of the FOUR (4) INSTALLED Tubing Connections:  See colors below:  Red - Incoming Supply Blue - to Dispenser Yellow - to Tank Black - to Drain	Various causes to inspect See the Following;  •If cut, is the tubing cut with a straight end to grab squarely? •Is the tubing inserted completely into fitting?  •Broken collect or fitting •Is there a problem with the collet and the quick-connect fitting?  •Tubing incorrectly removed •Damaged in shipping, handling, and/or delivery	•Follow instructions for Connection of Tubing.  Access the filter unit, remove tubing by depressing the collet and pulling tubing out. Using a utility razor knife, <u>squarely</u> cut 1/2" off tubing from the end. Make sure end of tubing is not flattened Reinsert the tubing into the fitting as far as possible. Check for leaks.  •Tug on tubing (do not pull hard) to check fitting and the integrity of the connection  •Upon inspection, prior to install or a result of proper start-up and inspection and fitting is damaged,  Replace simple part (call for proper fitting part)  Same as above
Leak at FACTORY INSTALLED fittings (only white tubing)	Same as above	Same as above
Leak at plastic compression fitting at UV Module (option, if applicable)	Damaged in shipping, handling, and/or delivery	Replace simple part (item# fc-uv-jaco)
Leak at Inlet Water Supply Connection	Various causes to inspect. Saddle tapping valve may not be applicable or installed correctly	•Check connections and/or correct. •Follow the inlet supply water instructions in this manual and/or install the preferred inlet connection
Leaks - Faucet	Possible Causes	Solution
Leak at the supplied dispenser/faucet spout	Spout needs to be re-inserted	•Spout pulls out from faucet body that's why it swivels. Spout has 2 o-rings at base and is inserted completely into bottom of body to prevent leaking.
Leak at the supplied dispenser/faucet base by handle (brass "T")	O-ring issue at inserted brass piece or "T" that holds and operates handle	•Replace the supplied faucet dispenser (item# depends on any finish option)
Leak at the connection to supplied dispenser/faucet	Compression fitting and other connections need to be properly made	•Check connections at various locations and re-connect, re-insert, tighten and/or correct.
Leak at another Mfg's faucet and/or connection to another device	All connections need to be properly made	•Consult with Mfg of other product and/or installer to check connections at various locations and re-connect, re-insert, tighten and/or correct.
Water running out of Air Gap adaptor of faucet	Black 1/4" & 3/8" tubing misinstalled or backwards  Drain saddle not allowing water to drain into trap properly	Follow proper instructions for Air Gap installation and connections Check hole for proper draining and proper drain saddle installation Check for proper drain location

## Trouble Shooting Guide - Reverse Osmosis Systems

Leaks - Housings	Possible Causes	Solution
Leak at cartridge housing, Leak at membrane housing, or UV housing (if applicable)	Misaligned, damaged or missing o-ring At Cap: Misaligned, damaged or missing o-ring  Cracked housing due to excessive water pressure issues, misaligned filter cartridge in housing and/or overtightening	<ul style="list-style-type: none"> <li>•Locate and align O-ring into groove inside cartridge housing,</li> <li>•Same for o-ring in membrane or uv housing caps</li> <li>•Replace simple o-ring part for correct housing</li> <li>•Replace housing part (item # h-filter, h-membrane, or h-uv) and correct issue that caused the problem (no plumbing needed)</li> </ul>
Water Flow Issues	Possible Causes	Solution
No water	Water supply is off	<ul style="list-style-type: none"> <li>•Turn main water supply on</li> <li>•Saddle tapping valve not open, if applicable</li> <li>•Turn water on at inlet connection, other if applicable</li> </ul>
	Saddle tapping valve piercing not complete or clogged, if applicable	<ul style="list-style-type: none"> <li>•Follow instructions to re-do piercing or use the preferred method to make this connection</li> </ul>
Not enough water	Low water pressure	<ul style="list-style-type: none"> <li>•Unit may not operate properly at less than 35 PSI feed line pressure (max: 65 PSI)</li> </ul>
	Incorrect Tubing Connections	<ul style="list-style-type: none"> <li>•Follow instructions to connect tubes to proper fittings</li> </ul>
	Storage tank depleted	<ul style="list-style-type: none"> <li>•Empty tank needs to fill over several hours</li> </ul>
	Other devices connected to system demanding too much water, too many other devices	<ul style="list-style-type: none"> <li>•Close other connected devices and allow tank to completely fill.</li> <li>•Maximum limit to storage tank and 2 other devices</li> </ul>
	Lengthy plumbing run, vertical plumbing, unit in a remote location	<ul style="list-style-type: none"> <li>•Total length of combined tubing to tank, faucet, and other devices not to exceed 20 feet. Vertical piping not applicable. Remote unit location is discouraged.</li> </ul>
Water flow is restricted	Storage tank pressure is wrong Storage tank valve not opened	<ul style="list-style-type: none"> <li>•Tank needs 5-7psi without water. Too much or too little and tank will not fill and dispense water properly. Check tank pressure with (0-20) gauge. Empty tank than use bicycle or sport ball pump to adjust</li> </ul>
	"TDS" Creep See RO Maintenance	<ul style="list-style-type: none"> <li>•Empty tank completely and allow system to produce a new tank of water, empty and repeat</li> </ul>
	Kinked or bent tubing	<ul style="list-style-type: none"> <li>Make longer loop with tubing to remove kink or bend</li> </ul>
Low flow from unit	Saddle tapping valve, if applicable may be restricting flow or misapplied on type of pipe being used (only applicable on hard pipe of copper, brass or steel)	<ul style="list-style-type: none"> <li>Back the end of the piercing lance out, turning the handle counter-clockwise. Then re-insert by turning the handle of the saddle tapping valve clockwise until it is again firmly seated. This will clear any possible debris that can block piercing lance and water flow.</li> </ul>
	Clogged prefilter cartridge and/or other cartridges	<ul style="list-style-type: none"> <li>If there is flow rate through unit without filters then there is a need to replace sediment and/or other filters based on water conditions and usage</li> </ul>

## Trouble Shooting Guide - Reverse Osmosis Systems

Problem - Water Quality	Possible Causes	Solution
Water Cloudy	<p>Air in system System start-up Filter or membrane replacement New installation, changing filters, disinfecting the system Open/close and open of water supply to home or in home</p> <p>Membrane seals</p> <p>Hot or High feed water temperature</p>	<p>Air in the system is a normal occurrence with initial start-up of the RO system. This milky or cloudy look will disappear during normal use within 1-2 weeks. Condition can reoccur after any filter change-out Empty and fill tank 3 times to reduce air and fines from system and/or filter replacement start-up</p> <p>Membrane seals are breached, re-seat or replace membrane Water supplied to unit must be below 95°F</p>
Salty Taste or Whitish Ice Cubes TDS Test less than 75% Rejection	<p>High feedwater TDS</p> <p>RO Membrane replace</p> <p>High feedwater temperature</p> <p>Post filter elements</p>	<p>Feedwater TDS levels above 500 ppm can result in lower quantity and quality product water. 1 psi loss per every 100 ppm above 500 ppm. Treat the same as low feedwater pressure. Increase water line pressure or may need booster pump for system</p> <p>Membrane replacement should occur when rejection rate has dropped below 70%</p> <p>Feedwater temperatures above 95°F can produce problems, cool water or find another supply</p> <p>New post filter elements can release small air bubbles and small fines which show as additional TDS in the product water. Follow proper start-up instructions</p>
Low Quality Water Taste, Odor (also see next page)	<p>Pre- and Postfilters</p> <p>Pre-Treatment needed</p> <p>Filter/Membrane/UV housing issues Storage tank water issue</p>	<p>Pre- and Post filters require replacement</p> <p>Feedwater pretreatment may be necessary for water supplies with high levels of iron, hydrogen sulfide, water hardness, etc. which may be exceeding system tolerance parameters</p> <p>Disinfect and inspect housings Empty tank, sanitize, empty, flush and refill</p>
Unpleasant taste and/or odor Metallic flavor Discoloration	<p>Need to replace filters System needs disinfecting System was idle, stored or misused for a long period of time. System under unfavorable conditions or changing water conditions</p>	<p>Replace filters and follow start up procedures Follow disinfection procedure Flush system by running water, replace filters and/or disinfect Determine what changed in your water supply and Flush, Replace and/or Disinfect, or change type of water treatment system based on local water conditions. Call your municipality or have your well tested.</p>
Rotten egg smell from water	<p>Hydrogen sulfide, iron, manganese is in the household water supply, presence of iron/sulfur bacteria System misapplied</p>	<p>Hydrogen sulfide, iron and manganese must be removed from household water supply before filter system. Visit our web site for other systems.</p>

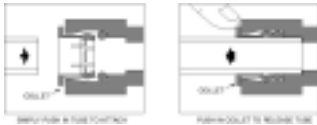
## Trouble Shooting Guide - Reverse Osmosis Systems

Problem - Water Quality	Possible Causes	Solution
High Total Dissolved Solids (TDS) in the Product Water	TDS "Creep" Tank has never been completely emptied	At night before bedtime, open dispenser, close other devices, then empty all the water from the tank. Allow water to produce overnight. Open other devices after tank is completely filled. Do this quarterly or as needed.
Low Quality Water Taste, Odor	Clogged prefilter(s) Low water pressure	Replace filter(s) Feed water pressure must be above 40 psi Check incoming supply water at inlet
and/or Tank fills too fast	RO membrane is new	New membrane has a preservative. Follow correct start-up procedure and empty tank 2 times before usage
	RO membrane issues	Remove and check membrane. Inspect 2 O-rings Membrane o-rings, brine seal at insertion end, check brine seal for proper seating into membrane housing
	RO membrane is expended	If membrane life is unusually short, find and correct the problem. Replace membrane.
	Product water and drain water tubing or connections are crossed	Correct tubing and plumbing connections
	No drain flow	Clear or replace drain restrictor. Drain line is clogged or restricted Clear or replace air gap line or faucet
	The RSR valve is not closing	"TDS Creep" (see above) empty tank completely and produce a new tank of water. Do this at least 4 or more times a year. Make sure pressure in tank is between 5- 7 lbs. Repair or replace RSR valve components
	New in-line activated carbon post filter or activated carbon cartridge not rinsed completely	Flush with several full tanks of product water
	The feed water TDS has increased	An increase in feed water TDS will give a corresponding increase in product water TDS CTA membrane on 3 Stage unit is tolerant to chlorine levels up to 2 ppm TFC membrane on 4 & 5 Stage units are not chlorine tolerant Change or add precarbon filter to remove chlorine
Low Quality Water Taste, Odor	Chlorine in feed water to membrane	
and/or Tank fills too fast	Restricted brine flow	Blocked brine line will foul membrane, decreasing production and rejection rate. Check the drain line for obstructions or restrictions blocking the flow into the drain pipe and air gap (if applicable).
	Low feedwater pressure over membrane	Feedwater below 60 psi will produce lower quantity and quality than the membrane specifications.
	High TDS - total dissolved solids reducing feedwater pressure over membrane	Feedwater less than 35 psi should consider using a low pressure boost pump. Booster pump requirement, inquire with web site or our offices
	High feedwater pressure	Feedwater above 65 psi should be regulated to a maximum of 65 psi into the system

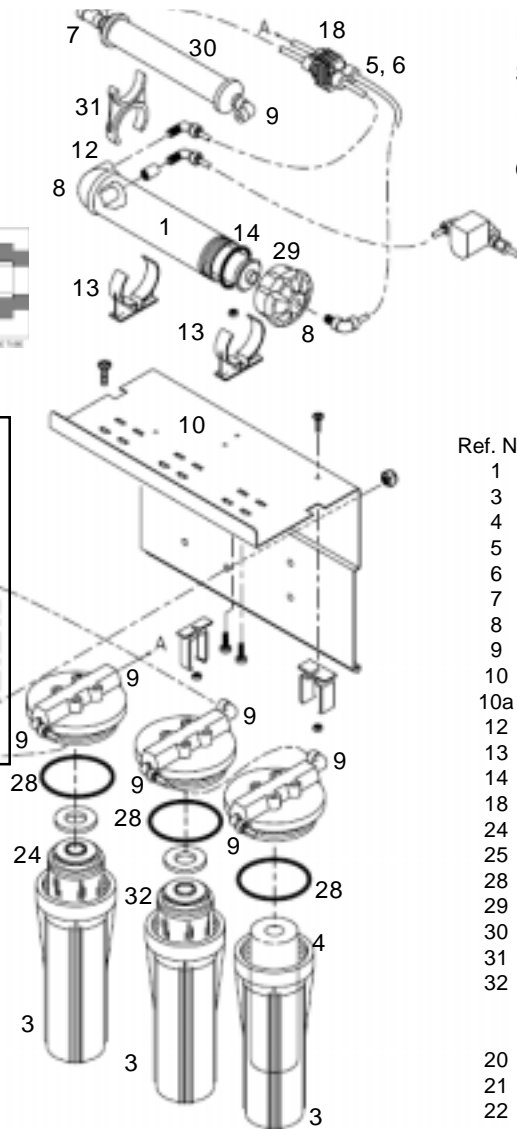
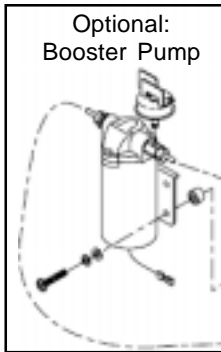
## Trouble Shooting Guide - Reverse Osmosis Systems

Drain - Issues	Possible Causes	Solution
No drain water	Clogged brine restricter	Replace brine restricter
Leaking drain assembly	Misalignment of hole in drain saddle.	Realign drain saddle, check for open drain hole
Leak from air gap opening in faucet or Water running out of Air Gap adaptor of faucet	Black 1/4" & 3/8" tubing misinstalled or backwards	Follow proper instructions for Air Gap installation and connections
	Drain saddle not allowing water to drain into trap properly	Check hole for proper draining and proper drain saddle installation
		Check for proper drain location
Excessive drain noise or gurgling coming from faucet	Drain assembly installed on bad or non-preferred part of your sink drain	Check hole for proper draining and proper drain saddle installation
		Check for proper drain location
	Hole or drain tube is blocked or obstructed with debris	Remove debris or restriction
	Excessive slack in drain tubing	Cut off excess drain tubing
	High feedwater pressure	Incoming pressure should not exceed 65 psi
	Air trapped in system echos the sound of water flow	Follow the warning in the middle of page 4.2-16 and follow the "Burping" Procedure to remove air in the lines
More than usual or excessive drain noise or gurgling due to rapid water flow on older systems	Membrane breached seals, worn	Re-align membrane or replace worn membrane
	Same issues with Low Water Quality Troubleshooting	Follow troubleshooting for low water quality and fast filling tank, this creates greater drain water flow.
	High or greater water usage	Tank needs to fill more often due to greater usage
Electrical (if applicable)	Possible Causes	Solution
UV not working	Lamp damaged, lamp cord has not been connected, Transformer is not plugged in or connected to wrong type of outlet Lamp has burned out Transformer not working	<ul style="list-style-type: none"> <li>•Connect lamp cord and/or Plug in transformer.</li> <li>•Make sure unit plugged into an unswitched electrical outlet. Check GFI reset. Surge suppression is highly recommended</li> <li>•Replace UV Lamp</li> <li>•Replace UV Transformer</li> </ul>
Booster pump not working	Pump cord not been connected Transformer is not plugged in or connected to wrong type of outlet  Transformer not working Pump not working	<ul style="list-style-type: none"> <li>•Connect pump cord and/or Plug in transformer.</li> <li>•Make sure unit plugged into an unswitched electrical outlet. Check GFI reset. Surge suppression is highly recommended</li> <li>•Replace Transformer</li> <li>•Replace Pump</li> </ul>

illustrated quick  
connect fitting  
and proper tubing  
connection



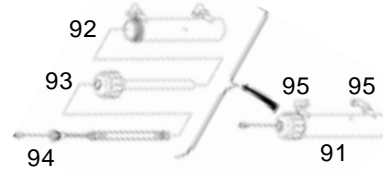
Optional:  
Booster Pump



## Five-Stage Reverse Osmosis

Schematic, Parts: Shown with Booster Pump Option  
for illustration purposes only

Optional: UV Disinfection Module shown below



31 Double Clips not shown with this UV illustration

Ref. No.	Part No.	Description
1	h-membrane	M/H; STRAIGHT PORT
3	h-filter	#10 SL WHITE/WHITE WO/PR
4	PRESED-05	PX05-9 7/8" 5M SED CARTRIDGE
5	fc-rsr-wh	JG 1/4" X 1/8" M COMM - White on RSR
6	fc-rsr-gy	JG 1/4" X 1/8" CONN - Grey on RSR
7	fc-ro-svl-t	JG 1/4" SWIVEL BRANCH T
8	CI480821W	JG 1/4" X 1/8" FIXED ELBOW; WHITE
9	CI480822W	JG 1/4" X 1/4" FIXED ELBOW; WHITE
10	ro-brkt-5	.090 ALUM BRACKET; POWDER COAT
10a	ro-brkt-5-bp	Substitute bracket with Booster Pump option
12	PI480821S	JG 1/4" X 1/8" FIXED ELB
13	h-m-clip	WHITE 2" FAST CLIP PPC202W
14	RO-M-TFC	TFC MEMBRANE
18	ro-rsr-tfc	150 GPD RSR FLOW CONTROL RSR100-150
24	GAC-00	10" GAC CARTRIDGE
25	PI010822S	1/4" X 1/4" MALE CONNECTOR
28	h-f-o-ring	HOUSING O-RING FH4000
29	020-MVH-0	O-RING KIT
30	RO-F-INLINE	10" T40 CARBON INLINE; 1/4" FNPT
31	PPC212W	DOUBLE CLIP - WHITE
32	RO-F-GAC-500	HIGH-DENSITY GAC PREFILTER
Not Shown	See Tubing Connections, Pg. 13-14	
20	t-blk-drain	1/4" PE TUBING; 60"; BK-P, DRAIN
21	t-blue	1/4" PE TUBING; 60"; BL-P, OUTPUT
22	t-orange	1/4" PE TUBING; 60"; OR-P, INPUT
23	t-yellow	1/4" PE TUBING; 60"; YL-P, TANK
Not Shown	See Storage Tank, Pg. 11	
2	ro-tank 03.2	RO102W 3.2 GALLON TANK 141S152
15	ro-tank valve	1/4" FQC X 1/4" FPT EL-VLVE PPSV500822W
Not Shown	See Drain, Pg 12	
11	ro-clamp kit	DRAIN CONNECTOR; 1/4" FPT PDC602F
Not Shown	See Inlet Water Connections, Pgs 8-9	
19	STV-2	SELF PIERCING SADDLE VALVE
Not Shown	See Dispenser/Faucet, Pgs. 4-7	
16	fd-ch-wh	LONG REACH FAUCET; WH/WH QMP-102W
17	fd-ag-wh	AIR GAP FAUCET ADAPTER
26	PI011222S	3/8" X 1/4" MALE CONECTOR-Air Gap Kit
27	t-blk-gap	3/8" PE TUBING BLACK - Air Gap Kit
---	WRENCH	SPANNER WRENCH FOR FILTER HOUSINGS
Option	See Above	UV Disinfection Module Shown Separately
91	H-UV	FULLY ASSEMBLED MODULE ON TOP OF UNIT
92	n/a	UV MODULE HOUSING
93	n/a	UV CAP, O-RING AND GLASS SLEEVE
94	UV-LAMP	UV LAMP AND LAMP CORD
95	fc-uv-jaco	JACO 1/4" COMPRESSION X 3/8" FIXED ELBOW
Not Shown		
---	POU-UV-E68	UV ELECTRIC 24 V TRANSFORMER
31	PPC212W	DOUBLE CLIP - WHITE

### Path of Water Flow through System

- from inlet water supply
- 1 through Sediment (PRESED-05)
- 1a through Booster Pump (if applicable)
- 2 through Prefilter (RO-F-GAC-500) then
- 3 through Membrane (RO-M-TFC) then
- 3a through UV Module (if applicable)
- into Storage Tank until needed

### When water is needed

- water flows from Storage Tank
- 4 through Postfilter (RO-F-INLINE) then
- 5 through 2nd Postfilter (GAC-00) then
- through dispenser or into another device (if applicable)

## Warranty Notification

### Notification:

This warranty is referenced by EWS, Inc. in all literature, addressed in General Terms and Standard Conditions of Sale, and is published in its entirety in all EWS, Inc. product manuals, websites, and in all service guides supplied with all product.

### Limited Warranty:

EWS, Inc., a Nevada corporation, hereby warrants all products to the original consumer purchaser to be free from defects in material and workmanship as stated in the following paragraphs:

- All residential point of use: countertop filtration, in-line filtration, undercounter drinking water filtration, shower filtration, residential reverse osmosis, and canister and filter cartridge point of entry pre-sediment and/or filtration units or systems for one year from date of purchase.
- All residential point of entry: pH decreasing and softener (resin and ion-exchange) systems, Environmental (EWS) Water Systems, Iron Removal units, CWL whole-home (filtration media) systems, pH increasing reagent (sacrificial media) units for 10 years on the tank and riser, 10 years on the ICN conditioner(s) (if applicable) and 5 years on the valve head from date of purchase.
- All commercial systems: Dependent on specification and application, please consult with EWS, Inc. upon specification.
- All filtration medias, resins, cartridges, uv lamps, and/or membranes are not covered by any warranty. Filter media, resin, cartridge, uv lamp, and/or membrane replacement or maintenance schedule will vary and must be replaced, as necessary, as determined by usage and local water conditions.

Product performance may vary based on local water conditions, proper product specification and application, proper plumbing application, setup, installation, startup, maintenance and/or usage. To ensure proper operation, follow all setup, installation, start-up and maintenance procedures as detailed in all service guides.

Not intended for use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after unit(s). The contaminants or other substances removed or reduced by these and any other water filtration or treatment devices are not necessarily in your water. To confirm the presence of any primary and secondary contaminants, have your water supply completely analyzed by an independent and approved facility or if applicable, contact your local water utility for information. Aesthetic, non-health related, or constituents without set federal standards may be part of water testing but are insufficient to determine proper application of any water filtration or treatment device.

EWS, Inc. will replace, free of charge, during the warranty period, any part which proves defective in material and/or workmanship under proper product and plumbing specification and application, normal and proper installation, use, service and proper care as published in detail in all service guides included with product. Labor charges are excluded from any warranty service or repair and are not the responsibility of EWS, Inc. Shipping charges may apply to delivered replacement parts or materials. Charges may also apply for the cost of any replacement media, resin, cartridges, uv lamp and/or membrane from any warranty service or repair. Information can be obtained at any time through a local dealer, distributor, representative or direct from EWS, Inc. and/or on-line at; [www.ewswater.com](http://www.ewswater.com). Replacement parts can be obtained from your local dealer, distributor, online or contractor.

This warranty is the exclusive warranty granted by EWS, Inc. and is in lieu of all other warranties of merchantability and fitness for a particular purpose and is further limited to defective parts replacement only. Labor charges and/or damage incurred in setup, installation, and startup, or repair, or replacement, as well as, incidental and consequential damages connected there with, are excluded, and are not the responsibility of, and will not be paid by EWS, Inc.

This warranty is void for any damages due to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc., or any replacement parts other than genuine parts or replacements supplied by EWS, Inc.

This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be subject to improper product and/or plumbing specification and/or application, misuse, abuse, neglect, accident, acts of nature, action of any military or civil authorities, improper handling and transportation, or improper setup, installation, and/or startup, or any violation of instructions furnished by EWS, Inc.

This warranty is not a warranty of merchantability, fitness, taste, aesthetics, and/or performance that may be personal and of subjective opinion and that does not relate to the performance of any system.



## Warranty Information and the Purchaser's Responsibility

Keep a record of the purchase receipt and/or installation receipt. Purchaser is required fill out warranty registration form(s) on applicable product(s) and register all product by either online @ [www.ewswater.com](http://www.ewswater.com), telephone, postal delivery, fax, e-mail (either [register@ewswater.com](mailto:register@ewswater.com) or information provided to [customerservice@ewswater.com](mailto:customerservice@ewswater.com)). **Failure to do so voids the warranty unless restricted by state regulations.**

EWS, Inc. does not sell, show or make available any information on any consumer in our database. This database is to ensure, if needed, proper warranty service, and good customer service for years to come. Please see our privacy policy published in our website at [www.ewswater.com](http://www.ewswater.com).

### Know Your Water:

- If on a municipal system, large or small, it is your right as a consumer to have access to the most recent test results and to expect adherence to federal guidelines, as well as any state or local requirements. Any problems should be reported to the appropriate agencies. Please acquire those municipal test results to become an informed consumer.

- If on an individual well, have your water completely and independently tested. Local code may require a simple test for coliform bacteria to approve a well, however you may be unaware of potential problems for you and/or your home. A local water salesman is looking to close a sale and is going to test for hardness minerals and a few simple and obvious issues, which may or may not be contamination problems. Their solution is almost always the same and yet may provide no resolution to any true problems. Obtain our "Guide for the Private Well Owner" on our website; [www.ewswater.com](http://www.ewswater.com). Review our section on well water testing and applications in our complete catalog with your local distributor, dealer, or our representative or visit our website.

### •WARNING:

Some restrictions apply to the use of softeners. Contact your local municipal water district or Gov't Agency. Brine discharge is already restricted on, or may be a problem for, septic applications and waste water treatment facilities. Since some states have already restricted softeners to metered valves to prevent excessive brine discharge, EWS, Inc. only provides metered valving in its line of softeners.

Restrictions or an outright ban may also apply to hot-side only, salt-exchange tanks or services. Local water dealers and other organizations do not inform consumers of these issues and believe these rules are unenforceable. The consumer is ultimately responsible.

Softeners may also provide warranty issues with pools and spas, certain other products and finishes. Softened water should not be used for drinking, cooking, pets or plants and is usually bypassed or "looped away" from the cold side of the kitchen sink. Reverse osmosis, which also has its drawbacks and issues with other products and materials, may be used to remove the salt from the water that the softener put in at the kitchen sink, yet may be misapplied for the actual local water conditions.

Any problems of water quality, or the fitness of any EWS, Inc. product that is associated with any mechanical, construction, application, installation, and/or environmental issue(s) (ie: flow rates, line pressure, piping materials, broken supply lines, changing water conditions; well or municipal water quality, et. al.), known or unknown, of the home or facility will not be considered by EWS, Inc. until such issue(s) have been resolved.

Responsibility for the proper product and/or plumbing specification, application and/or installation of any device manufactured by EWS, Inc. lies with the consumer, their builder contractor, plumbing sub-contractor and any other installer of choice. Items do not specify and/or install themselves. EWS, Inc. has provided many sources to acquire information on the proper application of systems and their installation prior to any purchase. EWS, Inc. manufactures a complete product line of point of use water filtration systems and point of entry filtration, softening and/or conditioning systems and/or appliances.

EWS, Inc. and the distributors of EWS, Inc. will stand behind the warranties of materials and workmanship. However, EWS, Inc. and the distributors of EWS, Inc. and the Environmental Water Systems Product Line do not bear any responsibility for improper applications of product and/or improper installation. It is for this reason that EWS, Inc. provides complete information on all product for your understanding, specification, application and selection, and proper plumbing application and installation.

To obtain warranty service support, contact your local dealer or contractor from whom you obtained the product or contact EWS, Inc., Customer Service, via phone, fax, or email.

## PRICING POLICY

EWS, Inc. has a current, published, and widely distributed, Pricing Guide that contains suggested list prices for certain water filtration and conditioning products ("Products") sold by EWS, Inc. ("Seller"). Seller assumes no obligation to sell to anyone any of the Products listed herein, known or unknown, at any price.

This current Pricing Guide has been prepared for the convenience of Seller's distributors and their customers. The list prices shown are guides only and do not purport to represent actual prices in any particular market and are not intended to interfere with the right and responsibility of Seller's distributors to establish their own resale prices.

All current prices herein set forth supersede all prior lists and are subject to change without notice. Seller may also, from time to time, change, modify, alter, improve and/or discontinue without notice the sale of any of the Products listed herein.

All seller's orders are accepted and delivered based upon the Terms and Conditions found on this Pricing Policy page, found in this Pricing Guide, available in all Seller's Product Manuals and reprinted on the reverse side of all invoices submitted and monthly statements sent. Please read them carefully. They provide information that is important to Seller's distributors and their customers.

## GENERAL TERMS AND STANDARD CONDITIONS OF SALE

Invoices are expressly limited to and made conditional upon the terms and conditions contained herein. Objection by Buyer to any of the terms contained herein shall be deemed to have been waived (if not previously waived) if written notice of the objection is not received by EWS, Inc. ("EI") within ten calendar days of the date of the first invoice or before part of the described goods are accepted by Buyer, whichever occurs first. Any additional or different terms proposed by Buyer are rejected unless assented to in writing by EI.

1. **PRICES:** All prices are in U.S. dollars. Prices are subject to change without notice. Orders will be invoiced at prices prevailing at time of shipment. All prices are F.O.B. our warehouse, Southern California and exclusive of any shipping, delivery, packaging or handling charges that may apply.
2. **TERMS OF PAYMENT:** The terms of payment on approved accounts only shall be net thirty days in U.S. dollars from the date of invoice to date of receipt of payment in our offices for all invoiced products whether partial or complete delivery of the product under order. All past due accounts are subject to a charge of 11/2% per month (18% per annum) for each month or fraction of a month on the unpaid balance.
3. **TAXES:** Prices do not include sales, use, excise or similar taxes. The amount of any present or future sales, use, excise or other tax applicable to the sale or use of EI's products or equipment shall be paid by the Buyer unless the Buyer shall have provided EI with a tax exemption certificate acceptable to taxing authorities.
4. **ACCEPTANCE:** All purchase orders are subject to acceptance by EI at its corporate offices in Las Vegas, Nevada and are subject to these Standard Conditions of Sale, unless otherwise expressly provided.
5. **SHIPMENTS:** Delivery to carrier shall constitute delivery to customer. EI's responsibility terminates upon delivery in good order to carrier. All goods are shipped at the customer's risk. Any claim for loss or damage in transit should be made promptly by customer against carrier. These and other shipment terms are written clearly on the reverse side of all packing slips that accompany all accepted shipments. All costs of freight, transportation, handling, in-route storage, certification and other documentation are to be paid by Buyer. Any other terms will be issued to Buyer, in writing, with approved credit and an established EI/Buyer relationship.
6. **DELAYS; FORCE MAJEURE:** EI shall not be liable for delays in delivery of the goods or failure to deliver the goods caused, in whole or in part, by inability to obtain transportation, equipment, or material, insurrection, fires, floods, storms, embargoes, action of any military or civil authorities, whether legal or de facto, strikes, labor difficulties, lockouts, acts of God, or other similar or different circumstances beyond the control of EI.
7. **CANCELLATION:** The Buyer may not cancel all or part of an order without verifiable notification to, and acceptance by EI.
8. **RETURN OF MATERIALS:** No Product may be returned to EI without written approval by a Company Officer. A restocking charge of 25% will be assessed (45% if unit had been used) NO EXCEPTIONS. Product must be returned freight pre-paid, boxed and in resale condition. EI will never take responsibility, under warranty or return, for improperly installed and/or misrepresented units.
9. **SELLER'S SECURITY INTEREST:** EI shall retain a security interest in the goods sold hereunder until Buyer has paid in full for such goods provided by EI in connection therewith and has performed all of Buyer's obligations under this contract.
10. **COLLECTION:** Buyer shall reimburse EI for all costs of collection, including reasonable attorney's fees, incurred by EI to collect any monies owing under this contract. A \$45.00 service charge will be invoiced on all returned checks.
11. **WAIVER AND MODIFICATION:** No waiver or modification of any of these Standard Conditions of Sale shall be effective unless such waiver or modification is in writing and signed by an officer of the Company in Las Vegas, Nevada. In event any part of these conditions be waived, or be held to be invalid by any competent court, the remainder shall continue in force and shall be interpreted as if such waived or invalid part were not contained herein.

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**EWS Inc./Environmental Water Systems**

**9101 W. Sahara Ave., Suite # 105-J8, Las Vegas, Nevada 89117**

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**[www.ewswater.com](http://www.ewswater.com)**

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# THE SPECTRUM IS THE RIGHT PRODUCT FOR YOU, YOUR FAMILY & YOUR HOME.

## SPECTRUM – THE PROFESSIONAL SERIES

Our most versatile systems, showcased by the National Association of Home Builders (NAHB) and New American Showcase Home. World-class EWS performance in a contractor-friendly install package. All Spectrum Series systems utilize our advanced, user-friendly digital valve head and adjustable bypass, which fits over 90% of homes in the United States and accommodates line sizes 3/4" to 1 1/2" without inhibiting flow rate or pressure. A Spectrum installation is a simple process, much like installing a water heater. Once installed, the self-cleaning Spectrum systems provide maintenance-free filtration for years, allowing you to enjoy the convenience, protection, and health benefits of the highest quality filtered water at every tap, every day.

### DO YOU HAVE HARD WATER?

YES

Some of us have harder water than others, and EWS generally considers 6 grains (102 ppm or mg/L) of hardness to be on the lower end of hard water. Select YES if you have hard water issues such as excessive spotting or mineral build-up in pipes, faucets and water heaters.

NO

### DOES YOUR CITY USE CHLORINE OR CHLORAMINE?

**EWS SERIES** Whole Home Water Filtration and Conditioning for Hardness Minerals.

#### SELECT BY USAGE\*\*

#### CHLORAMINE

##### EWS CC 1465

Model #: EWS-CC-1465-7  
Select this system if you have ALL of the following:\*\*

- 3 bathrooms or less
- 4 people or less
- 1 water heater
- Up to 2 ppm chloramine

##### EWS CC 1865

Model #: EWS-CC-1865-7  
Select this system if you have ANY of the following:\*\*

- 3+ bathrooms
- 4+ people
- 1+ water heater
- 2+ ppm chloramine

#### CHLORINE

##### EWS SPECTRUM

Model #: CS-EWS-1354-7000  
Pro Series. Our most versatile unit. Showcased by NAHB. Adjustable for 3/4" - 1 1/2" main water line. Up to 35 gpm.

The EWS Spectrum is the appliance that is applicable to the vast majority of homes on municipal water in the United States.



### DOES YOUR CITY USE CHLORINE OR CHLORAMINE?

**CWL SERIES** Whole Home Water Filtration for Water Without Hardness Issues.

#### SELECT BY USAGE\*\*

#### CHLORINE

##### CWL SPECTRUM

Model #: CS-CWL-1354-7000  
Pro Series. Our most versatile unit. Showcased by NAHB. Adjustable for 3/4" - 1 1/2" main water line. Up to 35 gpm.

#### CHLORAMINE

##### CWL CC 1465

Model #: CWL-CC-1465-7  
Select this system if you have ALL of the following:\*\*

- 3 bathrooms or less
- 4 people or less
- 1 water heater
- Up to 2 ppm chloramine

##### CWL CC 1865

Model #: CWL-CC-1865-7  
Select this system if you have ANY of the following:\*\*

- 3+ bathrooms
- 4+ people
- 1+ water heater
- 2+ ppm chloramine

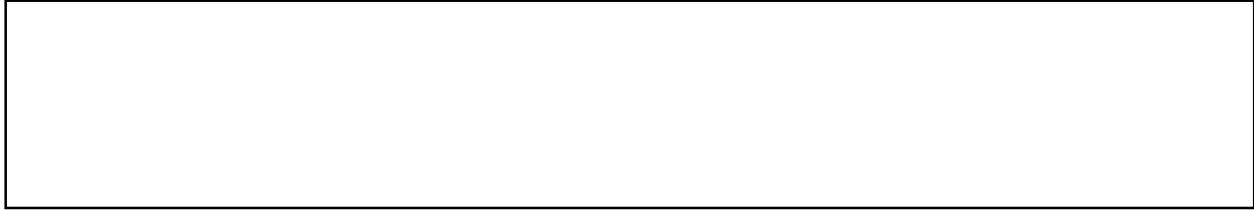
\*\*About 22% of people have tap water treated with chloramine (a corrosive combination of chlorine and ammonia), which requires more contact time (vs. chlorine) through a specialized filtration media to effectively filter it out of the water. EWS has designed four systems specifically for handling chloramine, which use our Pro Series valve that accommodates 3/4" - 1 1/2" main water lines up to 35 gpm. **Not sure if you have chloramine?** Call your water district or EWS Customer Service at 702.256.8182 for friendly assistance. **Important Note:** Our specialized chloramine removal media (CRM) is incredibly effective on chlorine as well, so when in doubt, err on the side of caution and select a Chloramine System.

STOP

### ARE YOU ON WELL WATER?

If you are on private or community well water, you need information to determine any water issues and their solutions. Well water requires complete and independent testing. Call EWS Customer Service at 702.256.8182 or visit [EWSWATER.COM](http://EWSWATER.COM) for more information.

The EWS, Inc./Environmental Water System Product available through:



Authorized Kitchen & Bath Showrooms, Appliance Showrooms, Building & Plumbing Wholesale Supply Locations and their building, plumbing, HVAC and service contractors, and Authorized Online Distributors.



Contact Information:

## **EWS, INC. Environmental Water Systems**

**ewswater.com**

**O:** 702.256.8182 (M-F 8:30am-4:30pm PST)

**E:** customerservice@ewswater.com

**F:** 702.256.3744

### **Mailing Address:**

9101 W. Sahara Ave., #105-J8, Las Vegas, NV. 89117

**Got a Question..?**

Seriously.... Give us a call. We're here to help.

**ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA**



**EWS is a Proud Contributor and Sponsor of Organizations Dedicated to Improving  
Health, Well-Being and the Environment**

- Heart • Lung & Respiratory • Allergy & Asthma • Dermatology & Skin • Digestive: Crohn's & Colitis •
- Oceans • Inland Water Ways • Wetlands • Forestry • Soil • Air •

